SEPTEMBER 27, 1941

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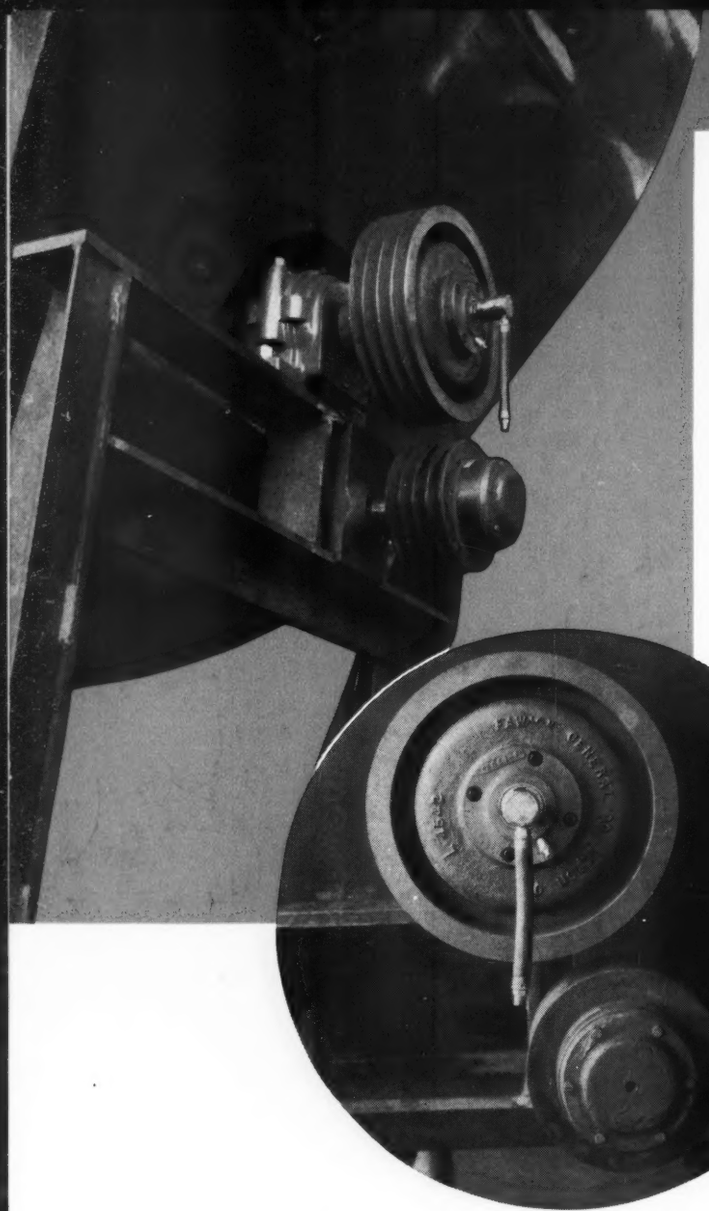

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Philadelphia

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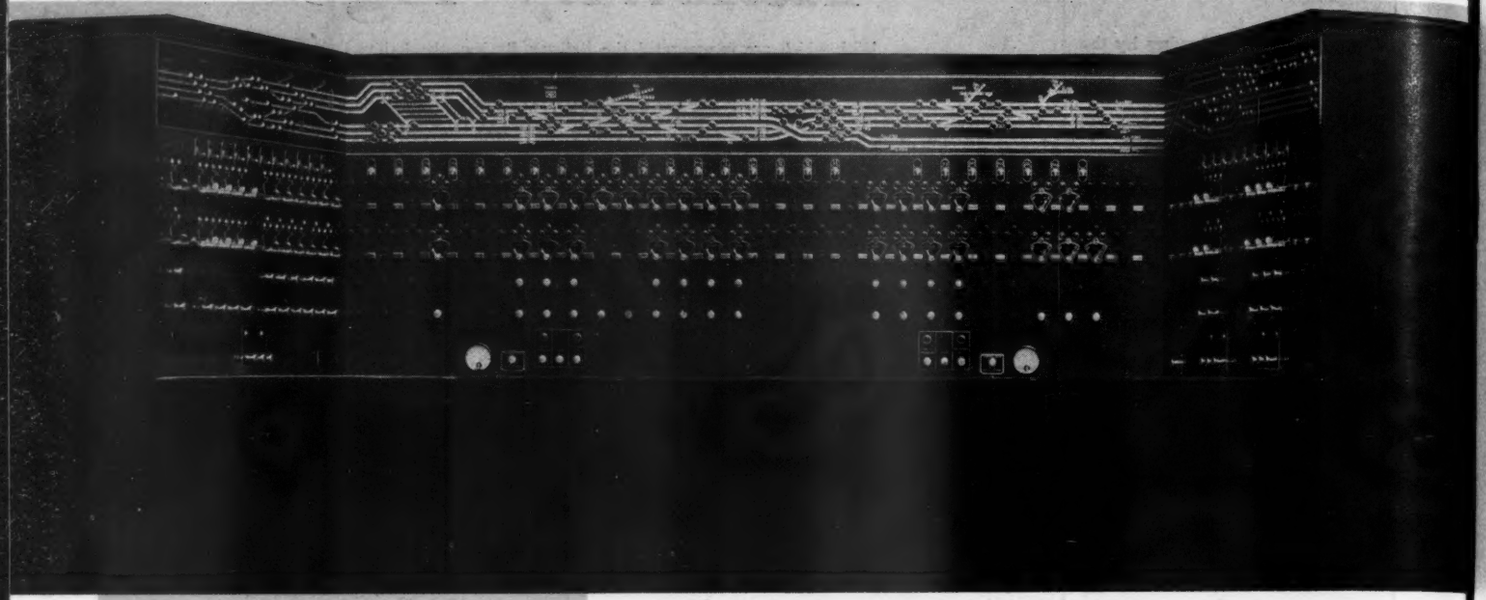
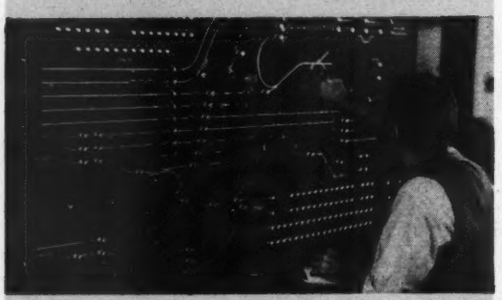
MODERN INTERLOCKING PRACTICES ARE VITAL AIDS . . .



All Relay System

Model 14 Power Interlocking



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RAILWAY AGE

Time to Get Ready for Coming Tough Times

We are going through a period in some important respects similar to, but in other important respects very different from, that of the last war. One reason for the difference is that that period was preceded by two decades of prosperity and record-breaking production, while the present one was preceded by the longest and worst depression in the country's history. Another reason is that during that period the President was a true liberal who believed in private enterprise as well as democracy, while for more than eight years the present head of the government has favored policies leading toward state socialism. There was no large increase in federal expenditures before the last war; the only large increase during the war was for war purposes; and federal expenditures were reduced from almost $19 billion in 1920 to less than $4 billion in 1922. The present administration has increased federal **civil** expenditures $5 billion a year since 1933; is adding huge defense expenditures to these greatly increased civil expenditures; and is building a backlog of huge expenditures on public works to be made after the war.

Changes on Railroads in Last War Period

Great changes occurred on the railroads during the last war period. Between 1917 and 1920 the number of their employees increased from 1,733,000 to 2,023,000 principally because of reduction in working hours. Their payroll increased from $1,740 million to $3,700 million, their operating expenses from $2,830 million to $5,830 million and their gross earnings only from $4,000 million to $6,180 million. As a result, their net operating income declined from $934 million in 1917 to only $17 million in 1920, and they were saved from general bankruptcy only by government guarantees of $945 million a year. When their gross earnings declined $700 million in 1921 they were saved again from general bankruptcy only because the Railroad Labor Board authorized reductions of wages and they were able to reduce the number of employees by 363,000.

The nation quickly emerged from the sharp post-war depression of 1921-1922 and entered a seven year's period of prosperity in which the railways shared. Can this be expected to occur again under such economic policies as the New Deal has applied for eight and one-half years, and evidently intends continuing to apply after the war? There must also be considered in this connection the fact that the railways were not subjected until some years after the last war to the greatly increased government-aided competition which threatens to continue increasing after this war.

Probabilities of Trouble Ahead

What are managements doing now, what are they planning to do, what will they do, to prepare the railways to stand developments following the present defense effort and war which apparently will be widely different from those that occurred in this country immediately following the last war?

This paper some months ago informed itself in a general way regarding the preparations a number of leading American industries are making to meet post-defense problems. Everybody with foresight apprehends that these problems will be as serious and complex as any industry ever has had to meet—and perhaps even more so. Here are some of the probabilities, any one of which would be a dislocating factor calculated to tax the ingenuity of business and industrial leadership:

More "Social" Experiments.—There is likely to be a large and sudden increase in unemployment not only depriving industry of a normal demand for its products, but also tempting government to God-only-knows what further boondoggling social experiments, such as, fortunately, were not tried after the last war.

"Public Works" on an Unprecedented Scale.—It is certain if the present incompetent and revolutionary Administration is continued in office there will be a huge program of uneconomic and harmful public works instituted—not so much to mitigate unemployment, although that will be the excuse for public consumption, as to promote further socialization of the economy.

"Ten Thousand TVA's".—Privately owned plants (which were more than sufficient to supply normal demand before the defense emergency arose) will face competition from war-developed plant capacity, largely government-financed. One noted research authority has called attention to the fact that a lot of these government plants are situated in unusual places, and are attracting populations which become political constituencies. After the defense emergency, not only politicians but local chambers of commerce and other pressure groups will endeavor to keep these government plants in production on peace-time goods. The way this man expressed it was: "After this war we will have not one TVA, but 10,000." Consider the enormous amount of new aluminum manufacturing capacity, for instance, the country will have at the close of the

war, which, if only partly continued in production, would mean unprecedented competition for the market of other metals as well as aluminum. And what about the huge airplane-manufacturing facilities? If these are continued in operation, by subsidy or otherwise, what may that mean not only to the railroads, but to manufacturers of automotive vehicles?

High Taxes and/or Inflation, Plus Poor Business.—There will be an enormous tax load to be borne when maintaining the gross and net revenues of industry will already be a back-breaking task—either this, or currency inflation with resulting problems to business of possibly even greater difficulty than heavy taxes.

An Inflated Wage Structure, Plus Misinformed Employees.—At the end of the war we are likely to have an inflated wage structure which would call for reasonable wage reductions to enable business to continue in operation with a minimum of unemployment, combined with an employee attitude steeled by political deception against economic realities.

These are just a few of the probabilities. Anyone with imagination who has observed the happenings of the past dozen years could extend the list almost indefinitely. What are the country's great industries doing to prepare for the difficult post-war times? A great many large concerns are working, almost feverishly, to perfect new processes so that they can be ready to produce their products at greatly reduced costs and thus hold on as well as they can to customers whose ability-to-pay will be greatly reduced. New systems of distribution likewise are under study, as are many other detailed schemes regarding which our information is general rather than specific. Industry is laying its plans —not only to keep its expenses down, but to keep its gross revenues up.

Railroads May Be Hit Harder Than Anybody

What strikes us as most disturbing is that **impending changes may hit the railroads harder than any other industry; and yet, comparatively speaking, there appears to be quite inadequate preparation by the railroads to find out what faces them or how they are going to meet it.** The industrial and economic shocks at the close of the present crisis may hit the railroads doubly hard because (1) they will have to face all or more of the problems of high taxes and wages, reduced volume of business and new and subsidized competition that any other industry will have to contend with; and (2) the impact of all the changes which strike other industries will also hit the railroads, because the railroads depend on other industries for their traffic and income.

If there is any industry which, for its continuance as free enterprise, needs to be now studying minutely the dangerous possibilities of the future, and contriving, with the utmost intelligence and ingenuity, to develop devices, methods and policies for overcoming these difficulties, it is the railroads. A few are doing this—probably not doing enough, but something; but many are so preoccupied with present problems that they are doing nothing to prepare for post-war conditions. One road has a department which is pretty foresighted and scientific about its own particular job; still another carrier is strong in another department. Regarding some phases of railroad operation there is a steady and efficient professional interchange of information and methods, so that almost all responsible officers engaged in those phases of operation are fully familiar with the best practices which exist anywhere in the industry. Some other railroad functions, however, are carried on with but a limited degree of contact from road to road—and, for that reason, the spread of the best practices lags.

One neglected function, certainly, is that of economic research. We have made some inquiries into what is being done along these lines by individual railroads, and what opportunities there may be to enlarge and improve this work; and in response to these inquiries we have received a number of expressions from competent railroad men. One such comment we published in our issue of September 13, page 420, under the title "Memorandum on R. R. Economic Research."

Railroads Are Equipped to Do This Work

Our correspondent, who prefers because of his candor to remain anonymous, believes the railroads already have the factual "raw material"—plenty of it—from which skillful study could draw conclusions of the greatest value to management in its forward planning. But such material is now largely going to waste because the men who might work it up into significant shape for managerial use either do not know how, or are not encouraged, to go to work upon it. Our correspondent believes that if a representative meeting of railroad research and statistical men were held they might all, by discussing their activities with each other, learn a great deal; and that, in course of time, a really professional grade of economic research into railroad problems might emerge.

If you talk with a good many railroad officers about this matter, or that of getting more accurate economic information to employees, you will find their first conclusion usually will be that both these activities should be carried on by the Association of American Railroads for the carriers as a whole. But is that more than part of the answer? The A. A. R. is doing good work in many of the fields in which it is engaged—for example, akin to what we are discussing here, in collaborating with the office of Ralph Budd regarding prospective traffic and car supply. But the kind of research here considered can, in all its magnitude, be done only partly by any centralized organization. The A. A. R. should not be called upon to keep current records of the industries on the line of a particular railroad; the future traffic prospects of these industries; the ratio of their traffic that they are shipping by rail and the services and rates that might increase this ratio.

Or take the matter of passenger traffic. On some railroads the future of this business is dark, indeed, and probably the more they can withdraw from it the better. But on other roads the situation is quite different. Each road needs to study such matters for its own benefit in the light of its own local situation. And

the data regarding what is being and should be done should be worked up by a man with a coldly scientific point-of-view, and not one likely to be swayed by thoughts of the "prestige" of his own department or even of his own company. The value of "prestige," if it deserves consideration at all, should be decided by top management and the directors. The A. A. R. can do valuable research regarding problems of the industry as a whole; it can serve as a valuable clearing house for many kinds of information developed by research; but the main job is one which needs to be done intensively on each railroad.

Why "Outsiders" Cannot Serve Effectively

There is a practically insurmountable difficulty in the way of having realistic research carried on by an organization apart from the individual railroad. That is, that research, **particularly into such a question as the loss of the traffic of specific shippers to other agencies of transportation,** cannot fail to disclose shortcomings in the organization of the carrier serving the territory where the traffic has been lost. And it is not human nature for a railroad organization to relish having outsiders come in, discover and make public its failures. So research of this vitally important kind is licked before it starts when it is carried on by anybody except the individual carrier—which, by doing its own research will get credit for correcting a bad situation, instead of (when the researchers come from outside) being pilloried for its failure.

The kind of economic research of which the railroads stand in most need is not that in which they already excel—namely, for reducing expenses. For years they have demonstrated their effectiveness in this quarter. What they need most now is to assure themselves of a substantial gross income in future. The information they need more than any other kind is from every specific shipper on their lines regarding what percentage of his traffic is moving by rail, and what by other forms of transportation; how the railroad may reclaim a larger share of his traffic and hold it; and how the railroad can co-operate to increase the business of every shipper who is a reliable railway patron. The amount of specific and systematic information of this kind now in possession of most railway managements is limited; and there can be no satisfactory future ahead of the railroads until they get more of it, and act upon it.

Other Industries Would Give Valuable Aid

The need for extensive and intensive economic research (and probably other kinds as well, but we are not here discussing that) by the railroads, both collectively and individually, especially the latter, is extremely acute because of prospects summarized early in this editorial. They already have the "raw material" and, very largely also, if properly encouraged, the personnel necessary to undertake this activity. The experienced research organizations of other large industries and of the National Industrial Conference Board would undoubtedly be of great assistance in helping to estab-

Non-Defense Expenditures

"The American people are today being asked to accept cheerfully, in the name of national defense, an unprecedented tax burden—a contribution just about equal to what the British are bearing and destined, for the next few years at least, to absorb a quarter of the national income. I think we may confidently rely upon the people's response to this call, provided the call is sincere. But the people have the right to insist that the money they thus contribute shall be carefully husbanded and expended only for essential purposes and without waste or extravagance.

"First of all they are justified in insisting that non-defense expenditures be cut to the minimum of necessity. It is disheartening to find to date no real accomplishment in this direction, either by Congress or the Administration. Careful checking of the government's recent expenditures indicates the possibility of saving two billion dollars annually in unnecessary non-defense costs. This could be accomplished, first, by abolishing or drastically reducing the expenditures for certain agencies that were instituted to relieve unemployment and economic distress and which under present conditions are no longer needed. Such are the agricultural program, the CCC, the NYA, and the public works activity.

"Here is where Secretary Morgenthau has recently suggested that a billion dollars could be saved. Into this same category should, I think, be brought also the WPA and certain other emergency agencies, with further savings of about three-quarters of a billion. In addition there is a long list of regular or non-emergency activities whose scope has been gradually expanding. By cutting these back, where possible, to appropriations somewhat between the high and low levels of the past five years, a further saving of a quarter billion or more could be made.

"In thus setting apart for reduction the non-defense expenditures we should steer clear of the fallacy that it is only the non-defense expenditures that need careful scrutiny. The really fundamental distinction is between essential and non-essential expenditures. We naturally put defense in the essential class. But obviously there are certain non-defense costs that are just as essential, and by the same token defense expenditures that involve waste and extravagance cannot be classed as essential. Moreover we must be on our guard against attempts to justify non-essential expenditures by tagging them with the defense label. There is room, I submit, for substantial saving even in the appropriations earmarked for defense.

"Obviously if economy is really to be accomplished the job must be done by Congress. The Administration is of course in position to contribute aid of utmost importance. But Congress has the final responsibility, and here also resides the power. Encouragement may be drawn from recent action by the Senate calling upon the Director of the Budget to provide alternative estimates as to how savings could be made of a billion dollars, a billion and a half, and two billions. Congress has the legal right to call thus upon the Budget Bureau for such assistance, and in so doing it is going to the proper source for detailed figures of possible cost reductions."

—From an Article in "The Watch Dog," a Publication of the National Economy League, by Professor Fred R. Fairchild of Yale University.

lish such work by the railroads on an immediately efficient and productive footing. All that is needed is for railroad men in a position to undertake this type of work to bestir themselves and do all they can within present limitations; but top management must recognize and encourage such activity if it is to be effective and valuable.

Closely following the provision of more adequate and scientific economic information for management, there needs also to be machinery, established for the dissemination (in different form, of course) of significant economic information to employees. Railroad employees now possess the veto power on railroad policy regarding many vital questions. It is not possible, without accurate facts arranged in significant and understandable form, for managements or employees to make decisions in either their mutual or separate interests in a time of rapid economic change.

Lessons of the Last War

The railroads have paid dearly, and are still paying, for the things that happened during the so-called "war economy" of World War I. The carriers were so busy producing ton-miles for war-stimulated traffic that they had little time for the wise salesman's foresighted solicitude for his customer's well-being. The war-quality of transportation service was what gave the great impetus to decentralization in industry and technical changes which destroyed traffic by the wholesale.

Rate increases to a permanently higher level (largely necessitated by war-time wage increases) didn't help the railroads hold traffic either. The "war economy" would not have been nearly so destructive to traffic but for the fact that the higher wages, the greater unionization and the more stringent regulation which came out of the war were largely made permanent, preventing the railroads from restoring natural peace-time conditions.

But added handicaps to efficient and economical railroad transportation were not the only untoward result of the last war upon railroad fortunes. Added to these arbitrary obstacles, were the opportunities afforded to railroad customers by the war-time development of new processes, new materials and expansion of productive capacity far beyond peace-time needs.

Industry was thus given many alternatives to high-priced railroad service. It could, and did, use the surplus productive capacity and greater technical efficiencies to bring about a reduction in its expenditures for transportation in spite of the railroads. And it also greatly increased the economy of production—spurred on by competition, at a time when it was not understood that the partial monopoly of the railroads in transportation was about to vanish.

An industry which has all the business it can handle, or even more, is always under temptation to lose interest in its customers' convenience, to ease up in its pressure on costs and to regard its pricing policies on a take-it-or-leave-it basis. The monopolistic attitude in transportation was a product of government action rather than of railroad managements, as is demonstrated by the fact that, before the advent of effective regulation, railroading was a highly competitive business. But the politicians and the regulators and the labor unions —yes and many shippers too—combined to force the railroads into acting as if they were a monopoly at a time when natural economic forces decreed the necessity of a return to a larger measure of cost-reducing and price-reducing competition. As usual, when economic forces are ignored, somebody gets hurt.

So the destruction of traffic began and has not yet, except temporarily, ceased. Former railroad customers are getting along with less and less transportation—because, naturally, when the cost of transportation remains almost static at or near an inflated war-time level while all other costs are reduced, industry is impelled to find substitutes for transportation. These unnatural forces had been corrected to only a minor degree when the present war started—and the carriers, still weakened from the wounds they got 23 years ago, enter a period when they face possible further political handicapping of the kind they got in the last war.

Further substitution by industry of materials, processes and decentralization for transportation again looms. Such substitutions, if circumstances invite them, promise to be more serious than in the last war, because this is a far more mechanized war than the last one was—and, hence, its technical by-products may be much greater.

Any material increase in the cost of labor and materials that enters into the cost of transportation must be met by an increase in freight rates. The only possible alternative lies in developing ways and means to handle a larger *share* of the nation's total traffic at more economical unit costs. The fact that there exists a large tonnage of transportation not moved by rail gives the carriers a *possible* way out which they did not have at the end of the last war.

Foresighted leaders of industry know that, after this war, their only salvation will be to reduce their costs. Many of them are alarmed at what they fear may happen to their transportation costs and are beginning to devise ways and means to become less dependent upon transportation. The present great concern of the railroads—to handle all the business in sight—is a worthy goal. Unfortunately, difficult as that goal may be of attainment, it is not sufficient. If, at the end of the present crisis, the carriers are going to have even the modest share of the peace-time traffic which they had when the war began, they need now to be clinching for themselves the business which they can economically handle *and which will continue to move when the war is over.*

To establish the railroad claim to such traffic now appears to be a step necessary to the future protection of all interests in any way connected with the railroads—capital, labor, producers of railway materials, and railway management.

Co-ordinated Mechanical Meetings Held at Chicago

V. R. Hawthorne,
Executive Vice-Chairman, Mechanical Division, A. A. R.

Four groups of mechanical department supervisors present constructive programs at two-day annual sessions

IN the interests of economy and conservation of time, four groups of mechanical department supervisors, who constitute the co-ordinated mechanical associations, held simultaneous annual meetings without exhibits at the Hotel Sherman, Chicago, September 23 and 24. These associations include the Car Department Officers' Association, Locomotive Maintenance Officers' Association, Master Boilermakers' Association and the Railway Fuel and Traveling Engineers' Association.

At a joint opening session, presided over by F. P. Roesch, vice-president, Standard Stoker Company, chairman of the Committee of the Co-ordinated Associations, impressive ceremonies included the raising of flags and singing the national anthems of the United States, Canada and Mexico. In a brief address Mr. Roesch emphasized the importance of full cooperation between the various departments of the railroads under present conditions and that on the supervisors who are the members of the Coordinated Associations must fall the brunt of this effort. "Your deliberations today and tomorrow," he said, "will result in promoting new methods of doing old jobs. Methods of conserving repair time in shops and terminals. Methods of obtaining more and better use from the materials supplied, and through such methods increase the availability of power and equipment, and show the world that there is no such animal as a railroad man who is not equal to any occasion. Therefore I repeat, if ever there was a time when railroad supervisory officers should get together and counsel with one another, that time is now." The opening address was presented by V. R. Hawthorne, executive vice-chairman, Mechanical division, Association of American Railroads.

Following Mr. Hawthorne's address, the associations adjourned to re-assemble in their respective meeting rooms for the conduct of association business, discussion of committee reports and listening to addresses by prominent railway officers from various parts of the country.

Address by V. R. Hawthorne

This meeting will, I am sure, be an inspiration and of great help to those who take part in the proceedings and discussions which have been so ably prepared. I wish to convey to you the greetings and best wishes of the officers and general committee of the Mechanical division, Association of American Railroads.

As you are all aware, the American way of life has always been dominated by representative assemblies such as you have here. This goes all the way back to the town meetings of the early colonies in New England, through the period of the colonial assemblies and into modern times with the Congress of the United States and the multitude of societies, associations, etc., for the free discussion of all problems, political, economic, commercial, technical and practical.

Railway officers, some 75 to 80 years of age, when the interchange of freight between railroads first began, proceeded to organize themselves into groups and associations such as are meeting here this week. These associations provided a means whereby the officers of one railroad could meet the officers of other roads serving in a similar capacity and through reports and discussions exchange experiences and through the years improve the performance of all to the present state of efficiency. This progress has not stopped, but in a broad sense has passed from the elementary stage to the advanced stage where refinements and advanced technic are now the principal basis of discussion, report and endeavor.

In the early days of railroading in this country, railroad men with creative ability began to invent improvements in appliances and parts for locomotives and cars, which were patented. Companies were organized and plants developed for the manufacture of such appliances

and parts, and there quickly developed an industrial group manufacturing parts and devices for sale to railroads. These manufacturers and builders of locomotives and cars in turn formed associations to consider and take action with respect to their common problems, particularly relating to the bringing of their products to the attention of the interested railroad officers.

Instructive Value of Exhibits

These groups of railway supply men have throughout the years arranged instructive and attractive exhibits of their products to coincide with meetings and conventions of railroad associations and have had no small part in the phenomenal development of our American railroad systems. Due to the stress of present conditions, no exhibit is being held with your meetings this year, but last year a splendid exhibit was held and was of great benefit to those in attendance. I hope that these instructive exhibits can be resumed after the present unsettled conditions have passed.

The science of railroading is always advancing. The application of scientific research to railroading has been an important factor in solving many problems. Among the large research projects of recent years may be mentioned the following: Air brake research program, extending from 1923 to 1933, resulting in the establishment of the present requirements for freight air brakes; air brake research program of the last few years resulting in the establishment of the present brake equipment for high-speed passenger trains; axle research resulting in new designs of axle for passenger cars; truck research resulting in the development of a number of designs of trucks for high-speed freight service; research resulting in the development of improved materials for cars and locomotives such as: high-tensile steel plates, shapes, bars, etc., high-tensile steel castings, improved tires and wheels, improved forging materials, etc.; research in connection with roller bearing application to locomotives and passenger cars.

Much of this research has been a joint effort of the railroads and the manufacturers of materials which the railroads use. Very little of it has had any spectacular phases but has represented determined, conscientious and laborious effort on the part of both the manufacturers and the railroads.

A comprehensive series of road tests of locomotive counterbalance standards has just been started using instruments especially designed for this work. Laboratory tests will also be started in the near future to determine the causes for failures of main crank pins.

Continued Research Vital to Railway Progress

The continued research and study devoted to railroad problems and the application of new and improved methods, devices and materials as a result thereof has given to this continent the greatest system of rail transportation in the world. We have the most powerful and efficient locomotives. Our cars are of large capacity designed to fit the needs of our great industries, and, due to their rugged construction may be operated with but a small portion of their service life lost due to necessity of repairs. Our trains operate on fast schedules and carry more, so that their hourly output of transportation is double what it was 20 years ago. The fundamental wearing parts of cars have been so standardized that repairs may be made quickly from the material stock of any handling railroad regardless of the ownership of the car. Twenty years ago, freight car hot boxes on the road were approximately five times as frequent as they are now, per mile run, and engine failures were about seven times as frequent.

All of this past effort on the part of railroad men working largely through groups such as yours has brought about this record of accomplishment and has given us this great system of railroads which will play such an important part in the problems growing out of our present great national defense program. In other words, the railroads are doing their part in this emergency and have provided rail transportation adequate to meet present demands and will continue to do so.

The railroads however are still progressing. They will not stop progressing and call the job completed. The world in which we live is constantly changing and the railroads, in order to maintain their proper place in the nation's economic life, must not only keep pace with the needs of today, but must anticipate the needs of tomorrow and prepare to meet them.

Associations such as those meeting here at this time have had much to do with stimulating and directing thought to those problems that require intensive study. The information which you develop through your discussions and the recommendations which you transmit to the Association of American Railroads, I can assure you, will receive the most careful consideration. At this time any recommendation that leads to increased efficiency, improved equipment and equipment maintenance or greater utilization of existing equipment should be most thoroughly studied.

Movie Night

On Tuesday evening there was a showing of moving pictures and slides for the members and guests of the four associations. A film entitled "The Power Behind the Nation," contributed by the Norfolk & Western, illustrated the production and handling of coal from the mine to the hold of the ship at tidewater. Two films of the United States Treasury Department were shown, one dealing with the detection of counterfeit money and the other urging the purchase of Defense Savings bonds. There were also two series of lantern slides. One, contributed by the Hartford Steam Boiler Inspection & Insurance Company, showed stress concentrations in various types of welded joints by means of polarized light. The other, illustrating the effect of a case of extremely low water on a water-tube locomotive firebox, was presented by the Baltimore & Ohio. There was no serious damage to the firebox and there were no casualties.

[An account of the proceedings of the Car Department Officers' Association and a part of the proceedings of the Railway Fuel and Traveling Engineers' Association will be found elsewhere in this issue.—Editor.]

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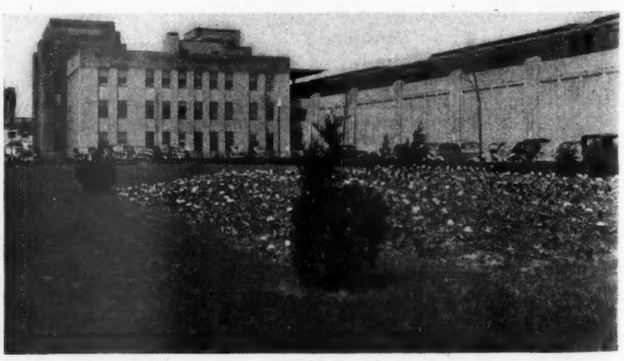


The New York Central's Modern Passenger Station at Syracuse, N. Y. is Fronted by a Broad Lawn and a Large Formal Garden

Keep Freight Cars Moving

This was the theme of the addresses at the annual meeting of the Car Department Officers' Association

THE meeting of the Car Department Officers' Association, held at the Hotel Sherman, Chicago, on September 23 and 24, was in charge of President A. J. Krueger, superintendent car department, Nickel Plate, who called the meeting to order and after the approval of the minutes of the last meeting, delivered the president's address. Mr. Krueger emphasized the necessity of conserving car equipment by every possible means, expediting the repair of all classes of freight cars when found defective and increasing the co-operation between mechanical and transportation departments, with a view to affecting a smoother and more efficient operation, especially in train yards in so far as it effects inspection, air brake tests, switching and the makeup of trains.

Following the consideration of certain association business, including the report of Secretary-Treasury F. L. Kartheiser, chief clerk-mechanical, C. B. & Q., E. B. Hall, chief mechanical officer, C. & N. W., presented an address "Co-operation Between Railroads and Departments of Railroads." W. D. Beck, district manager, Car Service Division, Association of American Railroads, discussed "Conservation of Equipment" and D. S. Ellis, chief mechanical officer, C. & O., presented the subject "Better Freight Car Maintenance." Standing committee reports were presented on the following subjects: Freight and Passenger Car Maintenance, Chairman J. E. Keegan, chief car inspector, Pennsylvania, Chicago; Shop Operation, Facilities and Tools, Chairman R. K. Betts, foreman car repairs, Pennsylvania, E. St. Louis, Ill.; Passenger Train Car Terminal Handling, Chairman C. P. Nelson, general foreman, C. & N. W., Chicago; Lubricants and Lubrication, Chairman J. R. Brooks, supervisor lubrication and supplies, C. & O., Richmond, Va.; Freight Car Inspection and Preparations for Commodity Loading, Chairman A. T. Wagner, general car foreman, M. P., Dupo, Ill.; Loading Rules, Chairman H. T. DeVore, chief interchange inspector, Youngstown Car Inspection Association, Youngstown, Ohio; Painting, Chairman C. L. Swing, general foreman, Pullman-Standard Car Manufacturing Company, Chicago; Interchange and Billing for Car Repairs, Chairman E. G. Bishop, general foreman car department, I. C., E. St. Louis, Ill., and Assistant Chairman D. E. Bell, A. A. R. instructor, C. N. R., Winnipeg, Man., Canada.

Election of Officers

The following officers were elected for the ensuing year: President, F. E. Cheshire, assistant superintendent car department, M. P., St. Louis, Mo.; first vice-president, G. R. Andersen, district supervisor car maintenance, C. & N. W., Chicago; second vice-president, D. J. Sheehan, superintendent motive power, C. & E. I., Danville, Ill.; third vice-president, I. M. Peters, superintendent and secretary, Crystal Car Line, Chicago; fourth vice-president, P. J. Hogan, supervisor car inspection and maintenance, N. Y. N. H. & H., New Haven, Conn.; secretary-treasurer, F. L. Kartheiser, chief clerk-mechanical, C. B. & Q., Chicago.

The new board of directors includes J. S. Acworth, supervisor of equipment, General American Transportation Corporation, Chicago; P. P. Barthelemey, master car builder, G. N., St. Paul, Minn.; W. A. Bender, master car builder, Alton, Chicago; C. Claudy, master car builder, G. T. W., Battle Creek, Mich.; J. A. Deppe, superintendent car department, C. M. St. P. & P., Milwaukee, Wis.; J. W. Fogg, vice-president, MacLean-Fogg Lock Nut Company, Chicago; L. H. Gillick, sales manager, Vapor Car Heating Company, Chicago; H. H. Golden, supervisor, A. A. R., Interchange and Accounting, L. & N., Louisville, Ky.; E. B. Hall, chief mechanical officer, C. & N. W., Chicago; A. J. Krueger, superintendent car department, N. Y. C. & St. L., Cleveland, Ohio; J. E. Keegan, chief car inspector, Penna., Chicago; G. E. McCoy, assistant general superintendent motive power and equipment, C. N. R., Toronto, Ont., Canada; J. P. Morris, general mechanical assistant, A. T. & S. F., Chicago; C. J. Nelson, superintendent of interchange, Chicago Car Interchange Bureau, Chicago; J. J. Root, Jr., assistant to vice-president, Union Tank Car Company, Chicago; C. E. Strain, superintendent car department, P. M., Grand Rapids, Mich.; and H. H. Urbach, mechanical assistant to executive vice-president, C. B. & Q., Chicago.

Co-operation Between Railroads and Departments

By E. B. Hall*

In choosing the rather far-reaching topic "Co-operation," I was much influenced by the marvelous example of this we are witnessing today, resulting in great monetary savings and highly satisfied shippers. The railroad men in this territory now, more than ever before, fully realize the seriousness of delaying freight, and the strenuous and unselfish efforts all departments involved are making to prevent it, is a shining example to prove that despite the keen competition existing between railroads, they can and do co-operate with one another.

Fully realizing that the car department is one of the most important factors in the transportation game, I feel that it should be given the best possible support by executive officers and other departments. The car men can, by fully understanding their many and varied regulations, and by the use of good judgment, save enormous sums of money, and while they are doing very well, I know that they can do better.

Time, however, will not permit detailing my reasons for making this statement, except to say that, special effort should be made to obtain better service from freight cars, which no doubt will become more important than ever before in connection with the tremendous task before us. The mileage can and must be increased, and the shopping of loaded cars in transit can and must be reduced. To accomplish this will, I repeat, require the best kind of co-operation between railroads and depart-

* Chief Mechanical Officer, C. & N. W. and C. St. P. M. & O.

ments of railroads, and it seems to me that you could do nothing better than to effectively deal with such matters.

I have heard it said that your association would be of little value to the railroads, but I have contended that if properly conducted it can be very helpful, even though its activity is confined to bringing about better co-operative relationship, and a better understanding of how best to perform the duties assigned to you. Some may gain the impression that discussing your various classes of work repeatedly does not make for progress, but I deem that far more productive than to strive too much for new developments, particularly so, when it becomes a matter of duplicating the work handled by the Association of American Railroads.

In this connection may I say that the personnel of your various committees is tremendously important. The success and accomplishments of your association depends to a great extent on the earnest study and activity that these men so unselfishly devote to their particular assignment. . . . We often find men of high ability reluctant to act as chairman of committees, largely for the reason that committee members cannot find time to attend meetings or assist by correspondence in the work of their committee, thereby placing a greater share of the work on the chairman. This situation, if continued, can only lead to a general breakdown of association activity, which in an association of this character and purpose would be exceedingly unfortunate.

I have arrived at the conclusion, which to some extent may be an admission on my part, that the remedy to this lies largely in the hands of chief mechanical officers. More car and locomotive department officers must be given permission to attend conventions of this character. Men selected for committee work must be given to understand that their supervisors encourage and support activity of this nautre. That they be given full release from their railroad assignment to attend committee meetings, when called, is evidently very necessary. In other words, a more tolerant and co-operative spirit toward association work on the part of mechanical department heads is necessary. You may rest assured that I will do everything within my power to accomplish that result.

Present Car Conditions Requiring Attention

May I call to your attention a few matters which under present conditions appear to me to be of vast importance in the satisfactory movement of freight. In the prompt and proper classifying of freight equipment to secure full utilization of cars, the closest kind of co-operation with the Car Service Division is highly essential. Many miles of empty car haul can be avoided by intelligent inspection and commodity carding of cars at terminal points.

Avoiding the loading of bad order cars, particularly with defects of a nature that may result in transfer of lading at the first interchange point. There is still considerable to be accomplished in greater promptness in repairing loaded cars. Practically every commodity moving today calls for quick delivery to destination but regardless there are countless instances where cars marked out in terminals and particularly from noon on are held over some times as long as 24 hours, whereas with proper facilities and full co-operation from your operating departments, the cars in most cases could have departed on schedule.

Perhaps never in the history of the railroads were there as many loads of different character and size moving on open-top cars as there are at present and, therefore, it is exceedingly important that extreme care be exercised in seeing to it, first, that these loads are loaded strictly in accordance with A. A. R. loading rules, and second, that they be carefully inspected at all terminals enroute to determine that they have not been disarranged. Naturally it is likewise important that the equipment furnished for such loading is not defective, in order that the lading be properly secured.

I have been much impressed with your temperate method of functioning since you re-organized under the jurisdiction of the Association of American Railroads, and I feel confident that your future efforts will create improved team work and prove highly beneficial to your employers.

Conservation of Equipment

By W. D. Beck*

War and war prospects are uppermost in the minds of every one and taxes are probably next. I am making a guess that the third apprehension is the question of prompt and safe transportation of materials whether these be for National Defense or for consumption at the breakfast table.

United States railways have been "on the spot" for a good many years; they were lambasted hither and yon for car shortages up until about 1922, but since that time there have been no shortages of equipment, nor of transportation requirements. As a matter of fact, they are moving the present business with a smoothness and regularity never before equalled.

Two reasons account for this: (1) The rehabilitation of the properties at an expense of some eight or ten billions of dollars following the return from government control, and (2) the organization of Shippers Advisory Boards, of which more anon.

In naming these two reasons, I am not unmindful of the very great part that your organization occupies in the field of transportation. To you is given the responsibility of designing the equipment which must be acquired. To you comes the additional responsibility of seeing that, once obtained, it must be kept in perfect repair and this matter of perfect repair these days means much more than just having a box on wheels as was once the case.

Today shippers and receivers of freight require a car which will carry the most fragile and the most elusive of materials from one end of this country to the other without damage. You know this and you know too that the average person would be amazed if he were told what we had to do to and for a car, flat, box, or otherwise, before it could be accepted to carry most any kind of a shipment.

But enough of that because it is your job and mine, and of course we conform. Let us not forget, however, that the present increased loading and consequent plus in our revenues, is not going to cure the steam railroad financial situation because of the many inroads thereupon, with more to come.

The railroads today own about 1,660,000 cars. They have put into service since January 1, 1941, 49,000 cars. They have on order 92,000 cars and others will be purchased early for 1942 and 1943, the number of which, of course, will depend upon the priority orders for the necessary materials. The average carrying capacity of all these cars is better than 50 tons each.

The bad order situation, 4.8 per cent, not only for light but for heavy repairs is the best in the history of man and reflects the ability of your organization (plus,

* District Manager, Car Service Division, A. A. R.

we ought to say, a little more easily-opened pocket book). Thus, we are geared up to loading 900,000 cars and better, per week and it is not requiring any great effort to maintain that altitude day after day. I am satisfied we can go to 980,000, or may be a million by continuing a constant alertness.

Strangely enough, our net ton miles are almost even with what they were in our bounteous years of 1926 to 1930. A surprising thing, due of course, to two things; (1) the increased speed of freight trains, and (2) the larger carrying capacity of our freight cars. As to these two items, the car and locomotive departments deserve much credit.

Incidentally, every freight car owned by United States Railroads in 1941 performed three-fifths more transportation service than in 1918.

The Function of the Car Service Division

May I put in just a word or two about the Car Service division and their especial responsibility in seeing that car service rules are observed. This is not an idle gesture, but is intended to bring about a condition which you as maintenance men fully appreciate, you want your own cars home so that they may be in proper repair.

We try to bring that about, (1) because the owners are entitled to the use of their cars, and (2) because we know that expert maintenance of equipment will result, and (3), because long experience has taught us that car service rules observance brings about an adequate car supply.

I said we would consider the Shipper's Advisory Boards later. These are great organizations, there being 13 of them in the United States, their respective areas conforming to the Car Service division districts. They were formed, as you know, to co-operate with the railroads in matters having to do with transportation. Not since their formation have we had a car shortage. We do not expect one and will not have one so long as these shippers do what they are doing for us today, i. e., releasing cars within free time, loading cars to capacity, ordering cars only as needed, loading cars without delay and loading them in accordance with car service rules wherever it is practical.

This is not just idle talk—these men are doing exactly what I've said and are crying for more opportunities to help. They have, indeed, organized Vigilance committees all over the United States to see that every shipper does his part in the prompt release of loaded cars, in the complete unloading of cars so that with dunnage, bracing and other paraphernalia removed, it is ready for the next shipper without going to the cleaning track.

These committees will watch every phase of the freight car game. There have been 70 or 80 set up in this Mid-West Shippers Board area of Illinois, Iowa, Wisconsin, Upper Michigan and Western Indiana. They know, you know and I know that with so many misguided people seemingly hungering for government control of the railroads we just cannot slip once. We all know that with shippers, receivers and railroad organizations, such as yours, working and pulling together, as to any transportation burden placed on the railroads, whether it be a million, or a million and a half cars a week, we will get away with it.

I would be amiss in failing to mention the very considerable loading not only now extant at ordnance plants and other government institutions, but that which is in prospect. Such places as Savanna, Elwood, Kingsbury in Illinois, and many such places elsewhere, will soon be in full production, and all will require the highest grade of car. We shall have our work cut out for us there and then.

Let me say this for the real government agencies. In this great defense program which they are engineering, the railroads are receiving their most skillful help in the matter of heavier loading, in the non-delay to empty cars awaiting loading and (more than anything else) in the prompt release of equipment.

Many of us remember what happened during the last war when 200,000 cars loaded with government freight were delayed (some of them for months) awaiting release from load.

Absolutely nothing of this sort is occurring today; in other words, government authorities are co-operating a thousand per cent.

Better Freight Car Maintenance

By D. S. Ellis*

The ultimate goal in the maintenance of freight car equipment should, as with locomotives, be sought on the basis of maximum economy to the railroad consistent with demand and expeditious movement of commodity to destination, which means a minimum of interruptions in the continuity of such service. To realize this attainment to the extent possible, of course, involves many contributing factors which must be co-ordinated by the supervision in all departments in order to produce the desired results.

It is necessary that all employees know what is required of them, and this leads to the advisability or necessity of preparing and issuing complete standard instructions to all concerned, including shop supervision, and that all be required to understand such instructions and perform their work in accordance therewith. Properly prepared instructions should be a valuable guide to the workmen and especially effective in promoting standardization in repairs to equipment. I cannot lay too much stress at this time on the necessity of carefully policing and following up to see that these instructions, when issued, are properly adhered to and followed, for the success or failure of improved maintenance depends on how carefully the job is policed.

Train yard repairs, such as putting in journal bearings, brake hangers, and pins, tightening loose running boards, box bolts, safety appliances, etc., if handled satisfactorily, become an appreciable item of economy in addition to preventing delays in car movement. It is of great importance that all materials and tools be properly distributed in repair yards, readily accessible to the repair men, in the interest of conserving the time of said repair men. Consideration should also be given to the proper location of clothes lockers, drinking water, and the many other numerous items and facilities required, in order that they be located to the best and most economical advantage possible.

Empty foreign cars known to be enroute home, if in safe condition to move to home line, and barring safety defects, should not be shopped. Such practice if adopted by all lines, would eventually lead to each road repairing its own cars, and such practice is also in accordance with Rule 1 of the Code of Rules for the Interchange of Cars.

Records prove that the average car is on the light repair track several times a year. The ideal situation would obtain if cars could be given necessary repairs at the time they are shopped for repacking journal boxes to keep them running until the next repacking—a period

(*Continued on page 485*)

* Chief Mechanical Officer, Chesapeake & Ohio, Cleveland, Ohio.

Many Aspects of Locomotive Performance Discussed

Traveling engineers and fuel men spend two busy days at fifth annual meeting

A HEAVY program of committee reports, papers and addresses occupied the members of the Railway Fuel and Traveling Engineers' Association for long hours at the two-day annual meeting held at the Hotel Sherman, Chicago, September 23 and 24. Following the joint meeting of the four Co-ordinated Associations, addressed by V. R. Hawthorne, executive vice-chairman, Mechanical Division, Association of American Railroads, the meeting of this association was called to order by its president, A. A. Raymond, superintendent fuel and locomotive performance, New York Central.

In addition to the reports and address summarized or abstracted here, reports were presented on the following subjects: Plugged Netting—Causes and Cure; High-Speed Braking with D-22 Control Valves; The Elimination of Moisture and Oil in the Air Brake System; New Locomotive Economy Devices; Utilization of Motive Power, and Force Feed Lubrication of Valves, Cylinders, Steam Auxiliaries and Machinery. Individual papers were also presented on Locomotive Performance as Affected by Steam Distribution, by J. L. Ryan, mechanical engineer, St. Louis-San Francisco, and Fuel Economy from the Viewpoint of the Water Engineer, by R. C. Bardwell, superintendent, water supply, Chesapeake & Ohio. Attention will be given to some of these items, together with the names of the officers elected to serve for the next year, in a later issue.

Coal Equivalents of Locomotive Fuel and Power

For many years fuel department men on the railroads have been concerned over the wide variation in the "coal equivalent" values used by the different railroads and the subject has been considered in several reports by the Committee on Fuel Records and Statistics. In its report for 1940 this Committee showed the following ranges of values in use on thirty of the largest Class I railways:

	Minimum	Maximum	Average
Coal, B.t.u. per lb.	10,295	14,000	12,500
Fuel oil, gallons per net ton of coal	115	215	161
Diesel oil, gallons per net ton of coal	15	215	45
Gasoline, gallons per net ton of coal	15	223	97
Electric current, kw. hr. per net ton coal	350	2,000	1,084

These coal equivalents used by different roads were reported to be based upon various methods of determination, such as "comparative service tests," "comparative service performance," "data based upon tests," "comparative heat content and thermal efficiency," "coal consumption per kw. hr. in company plant," "coal consumption per kw. hr. in public utility producing plant.

The report and the discussion of the report brought out the point, with which there was no disagreement, that "a consistent equivalent value would be one that would produce a fuel unit, in pounds of coal per 1,000 gross ton miles, of the same order of value as that produced on the same territory by coal burning locomotives in the same kind of service," and therefore, that "the conversion factor should be such that a road using electricity, fuel oil, gasoline or diesel fuel could at any time return to the use of coal without affecting the value of the fuel performance units" on the territory in question.

Our Executive Committee has assigned to the Committee on Fuel Records and Statistics this year, the task of proposing forms of procedure for the determination of coal equivalents for each of the several fuels and power commonly used and reported on O. S. forms, that would to a reasonable extent meet the statistical requirements of equivalence as stated above, for presentation to the various roads through appropriate channels with the suggestion that serious consideration be given to their adoption.

No one set of arbitrary formulae should be proposed as suitable for all roads or even for all conditions on any one road, and certainly it is not to be expected that the same equivalent values could be considered applicable to every road in the country. However, there is no reasonable justification for the extreme variation in values that the present reports show, and this range in values could be very greatly reduced if more careful consideration were given by many roads to the determination of the actual conditions which apply to the problem and to the proper procedure to be followed in establishing the coal equivalents.

The most truly representative and consistent values of coal equivalents are those developed by qualified personnel from actual observation and study of the fuel consumption and the service units produced by the fuels or power in question as compared with the coal consumption and the service units produced by coal burning locomotives in the same service. Where this procedure is not practicable and reliance must be placed upon theoretical treatment or calculation by formulae we favor the procedure that takes into account for each of the fuels being compared, the known factors that are favorable and those that are unfavorable through the medium of suitable constants carefully worked out and properly applied. With these considerations in view we have set up in following sections suggested forms of calculation to determine the coal equivalent of each of the several kinds of fuel and power, and by way of illustration have tabulated the results of such calculations for a few selected values of the factors involved, which we consider to be fairly representative of actual practice in each case.

Coal Equivalent of Fuel Oil Burned in Locomotive Fireboxes

The factors involved in the proposed formula are shown in a table.

Factors 2 and 3 may be combined into a single factor for each fuel representing the efficiency of its utilization. Thus, 0.90 ×

Factors Affecting Coal Equivalent of Fuel Oil Burned in Locomotive Fireboxes

Fuel	Factors	Values used in example,
Coal	(1) B.t.u. per net ton.	25,000,000 (12,500 B.t.u. per lb.)
Coal	(2) Per cent of the total coal disbursement used on line of road (total less consumption for terminal servicing of locomotives).	90
Coal	(3) Per cent of efficiency of the combustion of the coal.	65
Fuel oil	(1) B.t.u. per gallon.	135,000
Fuel oil	(2) Per cent of the total oil disbursement used on line of road (total less consumption for terminal servicing of locomotives).	96
Fuel oil	(3) Per cent of efficiency of the combustion of the fuel oil.	76

Example: 25,000,000 × .090 × 0.65 ÷ 135,000 × 0.96 × 0.76 = 148 gallons per net ton.

0.65 = 0.585, representing the efficiency of utilization of the heat content of the coal under the conditions assumed for the example. Likewise, 0.96 × 0.76 = 0.73, representing the efficiency of utilization of the heat content of the fuel oil under the conditions assumed for the example. These two factors may also be combined into one, thus, 0.585 ÷ 0.73 = 0.80, which may be considered the efficiency of the utilization of the coal relative to the utilization of the fuel oil. Such a factor may for convenience be referred to as the utilization factor of the coal relative to the oil.

The proposed formula will then take the following form: (a) B. t. u. per net ton of coal × (b) utilization factor of coal relative to oil ÷ (c) B. t. u. per gallon of oil = (d) fuel oil—coal equivalent, gallons per net ton.

With the thought that a range from 0.75 to 0.85 for this factor will embrace the limits of any ordinary service conditions experienced, we have prepared a table to illustrate the probable limits of the values for fuel oil—coal equivalents in gallons per net ton, considering coals of from 13,500 to 11,500 B. t. u. per lb. and oils of from 130,000 to 140,000 B. t. u. per gallon.

Range of Fuel Oil-Coal Equivalents

Coal, B.t.u. per lb. and per ton	Fuel oil, B.t.u. per gallon	Gallons per net ton		
13,500 lb. 27,000,000 ton	130,000	177	166	156
	135,000	170	160	150
	140,000	164	154	144
12,500 lb. 25,000,000 ton	130,000	163	154	144
	135,000	157	148	139
	140,000	152	143	134
11,500 lb. 23,000,000 ton	130,000	150	141	133
	135,000	145	136	128
	140,000	140	131	123
Utilization factors of coal relative to fuel oil		0.85	0.80	0.75

Kilowatt-Hour Equivalent

The formula proposed by your committee follows the method of comparing the amount of work measured in kilowatt hours produced by a ton of coal consumed by steam locomotives, including the coal consumed in terminal servicing, with the amount of electric current measured in kilowatt hours that must be purchased or generated and metered to the transmission system for the production of the same amount of work by the electric locomotive.

The factors are: 1—The average number of pounds of coal consumed by the steam locomotives per hp. hr., and the equivalent per kilowatt hour, one kw. hr. being equivalent to 1.34 hp. hr. Dividing 2,000 pounds by this number of pounds of coal per kw. hr. gives the equivalent number of kilowatt hours of work produced by the steam locomotives per ton of coal consumed. 2—The average combined efficiency of the electric transmission system and the electric locomotives with allowance for standby consumption of the locomotives. The reciprocal of this value

Probable Limits of Coal Equivalents of Kw. Hr.

Steam locomotive factors: Lb. coal per hp. hr. of work produced	Lb. coal per kw. hr. of work produced	Kw. hr. of work produced, per net ton of coal	Kw. hr. of electric current purchased or produced per net ton of coal				
3.0	4.025	497	825	765	710	662	621
4.0	5.360	373	621	574	533	497	467
5.0	6.700	299	498	460	426	398	373
6.0	8.050	249	415	384	356	332	312
7.0	9.380	213	353	328	305	284	266
8.0	10.720	187	311	288	268	249	234
Per cent of combined efficiency of electric transmission and electric locos.—(reciprocals)			60 1.67	65 1.54	70 1.43	75 1.33	80 1.25

shows how much greater must be the gross amount of electric current procured than the net amount actually converted into work by the electric locomotives, which latter value we compare with the work output and corresponding coal consumption of the steam locomotives.

With a range in factor (1) from 3 pounds to 8 pounds per horsepower hour, and a range in Factor (2) from 60 to 80 per cent combined electrical efficiency will embrace within their limits any ordinary service conditions, we have prepared a table to illustrate the application of the proposed formula and to indicate the probable proper limits of the values for coal equivalents in kw. hr. per net ton.

Gasoline-Coal Equivalent

The correct calculation of the equivalent value of coal consumed in steam locomotives as compared with gasoline consumed in locomotives or motor cars propelled by internal combustion engines in the same service, must be based upon knowledge of the combined thermal and mechanical efficiencies of the respective types of locomotives in the particular service and the proportions of the total coal disbursed to the steam locomotives and

Limits of Gasoline-Coal Equivalents

Coal, B.t.u. per lb. and per ton	Gasoline, B.t.u. per gallon	Gallons per net ton			
13,500 lb. 27,000,000 ton	125,000	86	65	54	32
	130,000	83	62	52	31
12,500 lb. 25,000,000 ton	125,000	80	60	50	40
	130,000	77	58	48	29
11,500 lb. 23,000,000 ton	125,000	74	55	46	27.6
	130,000	71	53	44	26.6
Utilization factors of coal relative to gasoline		0.40	0.30	0.25	0.15

the total gasoline disbursed to the gasoline locomotives that is not utilized in doing the work because it is consumed in terminal servicing or in standby loss. If exact information is not available, at least a close approximation upon each of these features can and should be determined and used in the calculations. The table illustrates the probable limits of consistent coal equivalent values for gasoline.

Diesel Fuel Coal Equivalent

The committee proposes the same procedure for the determination of the Diesel fuel-coal equivalent that is recommended in the preceding Section 3 for the gasoline-coal equivalent. In this case a range in the utilization factor of coal relative to Diesel oil from 0.25 to 0.10 would embrace a range in fuel utilization in work performed of from 16 per cent to 20 per cent for Diesel locomotives and from 2 per cent to 4 per cent for steam locomotives.

The table illustrates the probable limits of consistent coal equivalent values for Diesel oil.

Probable Limits of Diesel Oil-Coal Equivalents

Coal, B.t.u. per lb. and per ton	Diesel oil, B.t.u. per gallon	Gallons per net ton			
13,500 lb. 27,000,000 ton	135,000	50	40	30	20
	140,000	48	38.5	29	19
	145,000	46.5	37	28	18.5
12,500 lb. 25,000,000 ton	135,000	46	37	28	18.5
	140,000	44.5	36	27	18
	145,000	43	34.5	26	17
11,500 lb. 23,000,000 ton	135,000	42.5	34	26	17
	140,000	41	33	25	16.5
	145,000	40	32	24	16
Utilization factors of coal relative to Diesel oil		0.25	0.20	0.15	0.10

The report was signed by E. E. Ramey (Chairman), B. & O.; P. E. Buettell, C. M. St. P. & P.; J. G. Crawford, C. B. & Q.; H. Morris, C. R. R. of N. J.; E. G. Sanders, A. T. & S. F.; W. R. Sugg, Mo. Pac., and R. J. Tucker, C. & O.

The Road Foreman and the Diesel Locomotive

By W. D. Quarles*

In December, 1939, the Atlantic* Coast Line and the Florida East Coast inaugurated faster daily service between New York and Miami with our deluxe trains, The Champion, Diesel powered between Washington and Miami, and typical of Diesel passenger operation throughout the country.

This improved service established itself so permanently in the public's favor that 19 two thousand horsepower Diesel passenger units (18 Atlantic Coast Line and 1 Florida East Coast)

* General Mechanical Instructor, Atlantic Coast Line.

were added to provide Diesel power for the Vacationer, the Florida Special and the bigger Champion. The original Champion consisted of seven light-weight cars powered with one 2000-hp. unit; this being increased to 14 light-weight cars and two 2,000-hp. units. The Vacationer and the Florida Special were powered with 4,000- and 6,000-hp. respectively.

The Atlantic Coast Line and the Florida East Coast now have on order 12 additional units (9 Atlantic Coast Line and 3 Florida East Coast) to Dieselize other Florida trains for the coming winter season. With the units now on hand this will give us a total of 34 passenger units, all of which have been purchased in the past two years.

August 1, 1941, the combined mileage of our road Diesels aggregated 2,704,000 miles without a power failure necessitating replacement by steam, and as a consequence of this fine performance, we do not have stand-by protection for Diesel power.

On July 12, train No. 2, operating between Miami and New York (mixed streamlined and conventional equipment) was wrecked at Walthourville, Georgia, due to striking and knocking a cow into a switch stand of center passenger track. This was an opposing switch, which was opened, derailing both power units and seven cars. The speed of the train at the time of the accident was 75 miles per hour. The power units were rerailed and moved into our Waycross, Georgia, shops on the afternoon of July 14, where only steam facilities were available; however, the units were conditioned and returned to service on July 18. This reference is made to indicate the sturdiness of this type of power.

All concede the Diesel switcher's supremacy to the steam. We have two types of Diesel switchers on our line and careful records are being kept to determine the type best suitable for future purchases.

Handling the Diesel-Electric Throttle

The handling of the throttle of the Diesel-electric locomotive compares in no way with the handling of the steam locomotive's throttle. It is in this that the electric equipment can be subjected to severe abuse and high maintenance costs. The engineman should know what takes place in the power room when throttle is moved from idle position to position No. 8. If the operation of the electro-pneumatic governor and load regulator is understood, no trouble is experienced from these men failing to use the proper time element between throttle positions; when accelerating or decelerating, time must be had to permit the Diesel engine to respond and assume the new speed for each throttle position.

The engineman should know that at speeds below 30 miles per hour the acceleration should be made with traction motors operating in series. If acceleration is had with traction motors operating in parallel there will be improper application of power to traction motors, high amperage flow causing heating, and loss of power for acceleration.

When passing over railroad crossings the engineman should know that the vibration causes poor contacts between brushes and commutators on traction motors, which results in arcing and burning of commutators. When the throttle is in a position higher than Run No. 2, the voltage and currents are high. By reducing the position of the throttle to Run No. 2 this is minimized.

With the light-weight streamlined trains having little or no slack in the draft rigging, no trouble was experienced when these trains were started. However, now that Diesel-Electric power is handling trains, which consist of mixed streamlined and conventional equipment, or all conventional equipment, the question of throttle manipulation is of great importance, as well as the methods used in stopping trains of this make-up. The characteristic of traction motors is to develop a high torque when starting with resultant high drawbar effort, and on runs where there are two or three power units the slack is sometimes taken out severely and rough handling occurs, especially on rear of trains.

To take care of this condition, the writer has found that, first, much can be done to relieve this by stopping trains with slack stretched, making one application of the brakes and using graduated methods when releasing the brakes. Second, where two or three power units are handling trains, one or two power plants were isolated until the train slack was stretched, or the train started. This practice eliminated the trouble in starting and slack was controlled.

On our line at present, we have riding all road Diesels an electrical supervisor. He is just what the name implies; he has a knowledge of the equipment not yet obtained by the crews. Firemen assigned to Diesel-electric locomotives will perform all duties in the power room necessary for correct operation, and make any repairs required, under the direction of the electrical supervisor, who is subordinate to the road foreman of engines. With this method of operation we have developed, through education and training, assistant road foremen, firemen instructors and firemen, who are thoroughly capable of being trusted with the care and operation of our Diesel locomotives.

Road Handling With Mixed Brake Equipment

A fundamental requirement of new and improved air brake apparatus is that it operate in harmony with existing apparatus. The AB equipment meets this requirement. The first part of this report describes the major advantages and improved features of the AB equipment and the proper manner of making tests at terminals. An abstract of the section on train handling follows.

Train Handling

The mixture of AB brakes with K brakes in freight trains raise the train length limit for safe and satisfactory handling and this rise will be roughly proportional to the percentage of AB brakes introduced.

The percentage of all freight cars that are equipped with AB brakes is increasing rapidly and on some railroads which have a large percentage of their home cars equipped, the average number of AB brakes in regular trains is well over 50 per cent. Several of these properties are taking advantage of the resultant better brake performance and are operating trains both loaded and empty in regular service, which are well over 100 cars in length, ranging upwards to as high as 150 cars.

The fundamental consideration for smooth train handling is the control of the relative slack movement between different portions of a train which can occur because of the slack or lost motion which always exists between the couplers and the draft rigging of the cars. The total slack is made up of free or unresisted movement caused by wear on the coupler pulling faces and in the draft rigging, plus the travel of the draft gears at each pair of couplers. The total slack is sometimes measured by noting the change in the train length between having the train compressed with the slack all in and having the train stretched with the slack all out, but such a measurement is only relative because a greater slack change can result under some service conditions due to forces which often exceed the maximum drawbar effort.

The freight car draft gear commonly has a working travel of 2½ inches in each direction. The total slack movement that comes from the draft gear is 5 inches per gear or 10 inches per car. In compression or extension the gears are being closed against the resistance of the gear friction. When the slack reverses, the gears are being expanded by their release springs and, since the force exerted by these springs as modified by the friction elements comes into play just when the slack movement has started to reverse, it can often combine with other forces acting on the train to accelerate the rate of slack change.

The free slack motion is a much smaller portion. The amount will depend on the normal knuckle clearance and the degree of wear in couplers and draft rigging parts. Test records indicate that the average free slack for all freight cars is in the neighborhood of one inch per car which means that the total slack is around 11 in. per car. On this basis the total slack movement possible in trains will be about 91 ft. for 100 cars, 110 ft. for 120 cars, 137 ft. for 150 cars, etc.

Any train en route is continually subject to varying forces which act to either accelerate or retard it. The locomotive pull on a down grade will produce acceleration, whereas the frictional resistance, up grade and brake action are some of the forces that will produce retardation. These forces are seldom effective on the whole train but usually affect it in different

parts and to a varying degree so that the different parts of the train will tend to assume different speeds. Whenever such a difference can act to run the slack from all in to all out or vice versa, some portion of the train will be subject to a shock at the instant the slack movement ends and all parts of the train are forced to assume the same speed.

The degree of shock will depend on how fast the slack is moved, the weight of the train portions and the yielding resistance of the draft rigging through which the forces must be transmitted when the slack run ends. The serious and sometimes damaging shocks occur when force differences are allowed to develop which can run the slack in or out rapidly. If the engineman uses due care in manipulating the throttle and the brake control in combination with a knowledge of the slack status and the track conditions, it is often possible to avoid a slack reversal and nearly always possible to avoid a run of the slack which will be fast enough to produce any rough action.

The serial action of the brake is perhaps the most important consideration in the control of train slack movement. When a train brake is either applied or released its action is always propagated from the point where it is started. In other words, after the brake action begins on the first vehicle there is a time interval to the functioning of each succeeding brake.

For application the front brakes of the train can develop heavy retardation before any braking is effective on the rear cars. If the train is running forward with the slack stretched, this serial development of the retardation can generate heavy forces which will tend to cause a slack closure. Likewise, if the train is running forward with the slack compressed and the brake is released, the serial action can generate heavy forces that will tend to run the slack out. The propagation time for both the application and release functions is roughly less than one-half for a solid AB train compared to a train made up of all type K valves. This shorter time, combined with the controlled quick service action of the AB brake, greatly reduces the tendency of the brake serial action to run the slack so that for any given set of conditions it will be easier to control the movement of the slack in proportion to the admixture of AB brakes. In every case where a brake manipulation is required the engineman must keep these tendencies in mind and govern the control of power and braking so that a rapid change on the slack can not occur.

A factor which has an important bearing on the method of handling is the load distribution when trains are made up with a mixture of empty and loaded cars. A given degree of brake application will change the speed of a group of empty cars much faster than it will change the speed of a corresponding group of loaded cars. This ratio of difference in rate of speed change can be as much as 2 or 2½ to 1. Whenever the cars are distributed so that these uneven rates of retardation can cause a difference of 3 or 4 m. p. h. speed in separate parts of the train before the slack movement is completed, an internal collision or severe jerk must result as the point is reached where the slack is all in or all out. It is necessary for the engineman to know how the train is loaded and modify his manipulation of the throttle and the brake so that a serious speed difference can not develop within the train before the slack is adjusted.

The releasing of the brake when the train is in motion is often difficult to accomplish without a serious jerk shock because the train slack is often compressed during the preceding brake application. The release starts and runs serially from the head end and this will tend to run the slack outward. Under some conditions the retarded release feature of the K valves, combined with AB slow release, will be sufficient to allow the slack to move out gently. If loaded cars are grouped on the head end or the train is passing into down grade it may be necessary to hold the locomotive brake applied sufficiently to prevent a fast run out of the slack during the train brake release. When conditions will permit the train slack to be gently stretched before the brake release is started, there will be little danger of a rough run out.

The practice of attempting to make spot stops of long trains for taking water and coal often produces rough handling. The reason is that this procedure usually involves the use of the brakes at very low speeds where even a light application of the locomotive or train brake is apt to be highly effective and produce correspondingly heavy slack action. It is a better practice to stop a long train smoothly at a point where some latitude is available and then cut the locomotive off for fuel and water.

The successful handling of long freight trains involves a slow movement of the train slack both in starting and stopping. The slack can not be changed both quickly and smoothly at the same time. The time element is very important in all brake operations and this importance increases as the train length increases. In the unusual cases the engineman must use good judgment regardless of any general instructions.

The report was signed by F. T. McClure, assistant supervisor air brakes, A. T. & S. F.

The Steam That Does No Work

By Lawrence Richardson*

The best test of any business or manufacturing activity is its efficiency at light load or no load. Almost any company can make money if business is good and orders call for a night shift. Only if it can operate efficiently when the orders get scarce and hours are shortened will it hope to successfully weather business storms. Likewise, heavy traffic will keep some railroads going which later, when the curve turns downward, are handed over to the sheriff.

The real test of efficient locomotive operation is the overall efficiency. Good efficiency while working may be more than offset by poor efficiency while drifting. But on hilly roads, which are the rule rather than the exception, so much fuel is used downhill that a high drifting efficiency is necessary in order to obtain a satisfactory overall efficiency. There are many divisions in this country where 20 per cent or more of the total coal is used in drifting. A halving of the fuel used in drifting will decrease the fuel consumption 10 per cent on such divisions. There are records of divisions where this economy has actually been effected. There are many others where there are similar potential savings.

Smoke Lifting

Why use steam downhill? The principal, and in certain cases the only reason, is to lift smoke. No crew can satisfactorily operate a locomotive with smoke rolling in their eyes. Improvements in front end design—freer nozzles and enlarged stacks—have only added to the problem. But equally as important are the passengers. High-speed trains produce eddy currents proportional to the square of the speed. A train at 70 m.p.h. has twice as much suction effect as a train at 50 m.p.h. The result has been that some of the mile-a-minute trains have had smoke drawn into the air-conditioning system with consequent annoyance to passengers. In fact, some western roads have solved their difficulties by projecting the stack more than 16 ft. above the rail. But only a few roads can do that. Certainly no eastern road can do so with restricted clearances established years ago when power was light and cars small.

The alternative remedy is to design the locomotive properly to minimize the roll of the smoke. Do not misunderstand this statement to mean streamlining. In fact, some streamline locomotives have been guilty of annoying smoke infiltration in the air conditioning system.

There are two cardinal principles to be followed. First, get the smoke up as high as possible. Second, do not have eddy currents to pull it down again. Both problems so far have been largely attacked by cut-and-try methods. The results are largely a matter of individual opinions, always difficult to reconcile, rather than fact. The scientific use of wind tunnels and smoke streams to solve this problem is yet to be done. Nevertheless, the fund of information already collected in the development of modern aviation is helpful.

The second principle is to prevent eddy currents. What good is it to get smoke up and then have eddy currents pull it down again? Here again, the knowledge of airplane design is helpful. Whenever possible, projections should be avoided or streamlined. They should be placed outside the smoke stream area where possible. Changes in dimension should be as smooth as possible. There is also a device which is helpful where there is a tendency to produce eddy currents, a tendency that cannot be completely eliminated. It is the use of vertical plane surfaces to knife through eddy current areas and produce streamline currents. They are sometimes referred to as wings. Successful use has been made of these thin wings in France, Germany and the United States. A recent test on one of our largest railroads has shown:

* Assistant to Vice-President and General Manager, Boston & Maine.

them to be the most effective device in keeping smoke from rolling downward.

The better the front-end design, the less steam required in the blower. A poorly designed front end may require a full opening of the blower valve while a well designed front end will only call for cracking of the valve. The difference has an appreciable effect on the coal consumption.

Keeping Valves and Cylinders Lubricated

The other use of steam downhill, (when used), is to aid lubrication and prevent damage to the valves and cylinders. A few roads use by-pass valves, but the majority use steam. Where by-pass valves are used, they must be correctly designed and of ample capacity or they are useless. The German railways use a large by-pass, some 8 in. in diameter. One of the principal western lines in this country also uses the same device. When this by-pass is large, there is practically no compression as the air is free to move back and forth from one end of the cylinder to the other. The lack of compression under certain conditions is a disadvantage, especially if the reciprocating parts need effective cushioning at the end of the stroke. This generally occurs when drifting at speed.

In one design the relief and by-pass features are combined in one valve. In this device, the valve opens when the pressure in the steam chest drops to atmospheric pressure. This move opens ports to the atmosphere to serve as relief ports and also opens passages between the steam chest and exhaust passages serving as a by-pass. Care in shutting the throttle is of assistance in the operation of this valve.

Relief valves have practically disappeared from modern locomotive practice. Hardly a locomotive built in the last twenty years has had them applied. When used, the valves fluttered quite a bit and often failed. Carbonization frequently occurred. These failures contributed in a large measure to their discard.

The large majority of American railroads drift with steam. Those that just let an engine drift without special valves or without using a drifting valve or cracked throttle either do not have long drifts or else are having troubles that they should not have. A test was being run on our road one day and the engineer failed to open the drifting valve. The minute the train crowned the summit and started drifting, the temperature started rising, reaching a maximum of 825 deg. No oil will stand that temperature. There had been indications of this condition in that the paint had cracked off the valve chamber. After this temperature had been discovered, it was quietly confirmed by an engineman who told of seeing a valve chamber red hot. The explanation is simple. The work done in compressing air must be dissipated as heat.

The use of steam in drifting thus becomes a question of economy. It is entirely possible and practicable to drift with a cracked throttle. The chief drawback to the use of a cracked throttle is the trouble of maintaining a small opening and the difficulty of knowing just how much steam is flowing. A back pressure gage indicates the latter. A throttle 14 in. in diameter cracked 1/16 in. has a steam opening of 5½ sq. in. Tests on one of our Pacifics show that 0.44 sq. in. is sufficient. The comparison is obvious. In plain English, 5 sq. in. out of the 5½ is admitting "steam that does no work."

Some roads use a 2-in. globe valve for drifting to get better control. This gives up to 3 sq. in. of steam opening. There is a feeling on the part of some that it is necessary to prevent any vacuum in the cylinder. The difficulty in accomplishing this lies in the high pressure needed at the start of the stroke. With 7 per cent clearance, 210 lb. is needed. With 10 per cent clearance, 147 lb. It is more economical to work with lower pressures and have a slight vacuum at the end of the stroke, but not enough to bring gas all the way from the smokebox. To minimize this possibility the two exhaust passages should be designed to meet as near the valve as practicable, so that one end can help to break the vacuum in the other end and prevent sucking smokebox gas back into the valve.

The matter of valve and cylinder lubrication while drifting is of paramount importance. Not as much oil is required for drifting as is required for working. But some oil is required. Only a small amount of steam is needed to carry sufficient lubrication to the wearing surfaces.

In general, our experience shows that the proper drifting of locomotives effects appreciable economies in fuel. The amount of "steam that does no work" must be kept to a minimum in order to obtain a low number of lb. of coal for 1,000 gross ton miles.

Much work has been done along these lines. Much more needs to be done. There is no field of locomotive operation that offers the research possibilities that drifting does. The difficulty in the past has been that while locomotive testing plants permitted careful study of the locomotive, they do not work in reverse. They will not drift. When the throttle is shut on a test plant, the speed will drop from 30 m.p.h. to 0 in as short a time as one second. There is practically no drift in such a case.

However, foreign railroads have worked out a method of testing in road service whereby the locomotive is dragged by another locomotive. This permits of scientific study that is so necessary if the drifting of locomotives is to be done scientifically. The Diesel presents no drifting problem. The steam locomotive does. If steam is to keep abreast of Diesels, much research remains to be done.

Utilization of Coal of Various Sizes

The report points out that, when the chief source of supply of locomotive coal is from company-owned mines, the problem is entirely different than when the coal is purchased in the open market. In the former case it is desirable to effect some segregation to keep the fines away from hand-fired locomotives. Where the source of supply is obtained from the various fields, size becomes more difficult to regulate because the railroad is expected to serve as a buffer between the consuming public and the coal producers. Here there is a constantly changing picture.

The report advocated that, where possible, the coal be properly sized before being placed on locomotive tenders. It points out, however, that the predominant factors are properly designed grates to provide for adequate and uniform air supply, that, at the same time they will insure that the coal will fall on the fuel bed and remain there, and that the locomotive is properly drafted.

It has been determined under test that coal larger than 3-in. top size does not distribute properly in fire boxes with grate areas of 80 or more sq. ft. If fireman adjusts steam jets to distribute the largest size coal over entire grate surface, the smaller sizes will be carried up against throat sheet. If steam jets are adjusted to permit smaller sizes from carrying over against throat sheet, the larger sizes will fall short around distributor or fire pot, resulting in an uneven fuel bed and poor combustion results.

Owing to many railroads using all of the various sized coal on both stoker and hand fired locomotives it is felt that the stoker designers have a special duty to perform before delivering new stokers to the railroads. That is to have their engineers make a survey of the coal which is to be handled by the stokers. The conveyor screw mechanism should be of such design that the diameter and pitch of the conveyor screw will handle the normal run of mine coal up to 8-in. lump from locomotive shopping period to shopping period without difficulty.

The tendency on the part of some stoker designers is to furnish a general type of screw conveyor mechanism to handle all grades of coal whether prepared or run of mine. This procedure is satisfactory on railroads that prepare the coal or whose coal does not exceed 4-in. top size, but when a railroad contracts for coal up to 8-in. lump or prepares its coal not to exceed 8-in. in size, the stoker designers should take this into consideration and build stokers to suit that size of coal.

We have found, and we are sure all railroads have also, that a uniform size of coal is more satisfactory and economical than lump, egg, nut and screenings contained in run of mine that must be crushed by the stoker because of the erratic jet pressure needed to handle such sizes. The jets set for a uniform size, say about a 1⅝ in. by zero would not handle as efficiently 6 in. by zero or 4 in. by zero.

In concluding its report the committee recommended the use of coal not to exceed 2¾ in. in size for stoker-fired locomotives and ranging in size between 2¾ in. and zero. For hand-fired locomotives the size of coal should not exceed 4 in.

The report was signed by S. A. Dickson, (*chairman*) Alton; M. B. Adamson, C. R. I. & P.; P. E. Buettell, C. M. St. P. & P.; W. T. Capps, B. & O.; J. D. Clark, C. & O.; H. B.

Grimshaw, S. A. L.; S. M. Roth, W. M., and W. J. Tapp, D. & R. G. W.

The Gas Turbine Locomotive

The report, which was signed by L. P. Michael, C. & N. W., briefly reviewed the development of the gas or combustion turbine by the Allis-Chalmers Manufacturing Company, Milwaukee, Wisc. With respect to the application of this type of prime mover to locomotives, the report quotes the consensus of the engineers of this company as follows:

"Nothing has occurred to change our opinion that this type of power generating unit can be applied to such service. The studies made two years ago indicate that, when the gas turbine unit is designed for a maximum operating temperature of 1,000 deg. F., both the efficiencies and weight-power relations are feasible. At the same time, it was recognized that increasing the inlet temperature to the gas turbine would improve the efficiency and also reduce the weight of the equipment for a given power.

"Since the studies two years ago, attention has been given to the development of gas turbine equipment for higher temperatures. At the present time, such a gas turbine is in the development stage. The development program includes the construction and complete testing of this equipment at a higher temperature. It was, therefore, deemed advisable to delay the active development of gas turbines for locomotives until the higher temperature test results of this experimental unit are available.

"This development turbine is not suitable for railway service. In the interest of aiding the research activity, the various component parts have been separated as much as possible, in order to promote accessibility and to facilitate assembling and dismantling for examination. The development of small light weight equipment, such as would be necessary for railway use, has not as yet progressed beyond the preliminary design stage.

"Work will not be pushed on a locomotive gas turbine unit until the test results are available from the equipment mentioned above.

"The amount of defense work in the Allis-Chalmers plant has limited the development of the gas turbine for locomotive service, except as the experimental work under way on high temperature operation may apply.

"The metallurgical phase of the problem has also been given considerable attention. Development work is under way on new materials that show promise of being substantially better than the older alloys used in steam turbine or gas turbine work up to the present time. An extensive research program on metals is being continued, with every prospect that the results will aid further in the direction of increasing the upper temperature limit."

The report predicted that, when high-tensile lightweight alloy metal is again available, it will be possible and practicable to design and construct a gas-turbine locomotive of 6,000 hp. in one unit, which will carry sufficient fuel and water to supply the locomotive during a 500-mile run. This is based upon the use of a direct mechanical transmission such as was described in the report on this subject presented at last year's meeting of the association.

* * *

Keep Freight Cars Moving

(*Continued from page 479*)

of approximately 14 months. This may seem too long but it is not impossible of attainment except insofar as failures occur which are completely beyond our control, such as defective wheels, damaged safety appliances, worn out brake heads, etc., but with improved maintenance even such failures should decrease in frequency.

The possibilities for increasing the time between shopping of cars is at once obvious to all of you car department men when it is realized that each of you can, no doubt, recall many instances of seeing cars on the repair tracks within a week or two of the time they were previously on repair tracks shopped for repairs that you know should have been made at the first shopping. Examples may be cited, such as decayed running boards, defective wheels (for one purpose or another), worn-out brake heads, low couplers, etc. These examples, to my mind, are the result of carelessness on the part of repair track supervisors. We have known instances on our lines, of cars being on various repair tracks three and four times in as many days and for repairs that should have been made at the original shopping.

It is very significant to consider what may be accomplished by interested co-operation and co-ordination on the part of the operating department. We have dwelt on some of the essential items on repairs to equipment. To prevent damage to equipment through rough handling and thereby effect much economy is well within the scope of possibilities. It is a familiar sight to see cars kicked in switching, with such speeds as are certain to result in damage to equipment and lading. Damage due to such impacts are very costly to repair since the car structure is frequently damaged, center sills broken, ends bulged out, draft gear stops broken, etc., all of which involve labor and material for repairs, and a break in the continuity of service. Renewal of broken couplers and draft gears on such damaged cars is frequently required, and car parts too numerous to mention fail under certain conditions of high speed car impact.

Much has been said of damaged car equipment due to the carelessness on the part of train crews, but relatively little accomplished. Co-operation, therefore, between the operating and mechanical departments to improve this situation is not only timely, but necessary. May I suggest here that your organization make this a subject for consideration jointly with the Operating department. Improvements will depend upon the interest created. The Operating department can help by keeping cars fit by proper handling.

Co-operation between repair track, shops and designers of equipment, and our engineers, should be encouraged since suggestions from the men themselves who make the repairs to equipment often result in designs which are more easily repaired, lower in initial cost, and most economically maintained. In writing specifications for new equipment little or no thought may be given to the practicability of removing or replacing a part unless contact is had with the men doing such work in the field who are in a position to know where difficulty is experienced. In fact, it is being more and more appreciated today that the need exists for suggestions from men in the field, and many suggestions for improvements have accordingly been included in new designs. This feature in design should be uppermost in mind with the thought, of course, that strength must always be safeguarded, and ease of removal and replacement must not be accomplished at the cost of weakening the structure.

Roadmasters Tackle Problems of a New, Intensive Era

Power Tools and Equipment Are Becoming Still More Essential to Maintenance of Way Operations

Meet in fifty-sixth annual convention at Chicago, September 16-18 with a determination that maintenance-of-way facilities shall keep pace with enlarged demands. View the interesting exhibit of the equipment and materials designed to increase production and reduce costs

Part I

MEETING in an atmosphere more tense with immediate responsibilities and potentialities than for a number of years in the past, as increased speed and intensity of operation, stimulated by the country's huge national defense efforts, have brought enlarged and more exacting demands upon maintenance of way forces and the track structure, the members of the Roadmasters' and Maintenance of Way Association held their fifty-sixth annual convention in the Hotel Stevens, Chicago, on September 16-18, with a large attendance and a program designed specifically to challenge the most pressing problems that lie immediately ahead of them. Supplemented by a large and constructive exhibit of maintenance of way materials and equipment presented by the Track Supply Association, the meeting was attended by 386 roadway officers, registering from 36 states, the District of Columbia and Canada, with a total attendance, including exhibitors, of more than 700. All sessions of the convention were presided over by John J. Clutz, president (division engineer, Pennsylvania, Indianapolis, Ind.)

The program, which contained many high points of interest, was opened by C. H. Buford, vice-president, Operations and Maintenance department, Association of American Railroads, who spoke of the serious demands in prospect for rail transportation and urged the fullest co-operation on the part of maintenance men in meeting these demands successfully. Others who addressed the convention included B. R. Kulp, chief engineer, Chicago & North Western, who spoke on The Use of Cars and Locomotives by Maintenance-of-Way Forces in Times of Maximum Traffic Demands; Fred S. Schwinn, assistant chief engineer, Missouri Pacific Lines, who spoke on How We Can Meet the Labor Requirements of an Expanding Program in a Period of Widespread Industrial Activities; E. A. Clifford, chief purchasing officer, Chicago & North Western, who spoke on What We Face in Materials, and H. R. Clarke, engineer maintenance of way, Chicago, Burlington & Quincy, who spoke on What We Can Do About It; A. E. Perlman, chief engineer, Denver & Rio Grande Western, who spoke on Streamlining Our Maintenance of Way Practices to Meet the Conditions of a Defense Era; and G. R. Westcott, assistant engineer, Missouri Pacific, who spoke on What We Face in Equipment.

Forming the foundation of the program, technical reports were presented by six committees, on Rail-End Wear—Causes and Correction; Off-Track vs. On-Track Roadway Machines; Gravel Ballast—Its Requirements and Preparation; Recent Developments in the Renewal of Ties; Present-Day Roadway Drainage Requirements; and Maintaining Right-of-Way Fences—Organization and Methods.

A special feature of the meeting was an evening session on Tuesday, which was addressed by Col. L. R. Groves, Quartermaster General's Staff, U. S. War Department, on The Railway Construction Program of the War Department. Other special features included a "Summing-Up" address by G. L. Sitton, chief engineer, maintenance of way and structures of the Eastern lines of the South-

ern, at the final session on Thursday afternoon, in which he reviewed and commented upon the many constructive ideas brought out and developed during the convention; and the twenty-seventh annual banquet on Wednesday night, tendered to members of the association and their families by the Track Supply Association, which was attended by 683 persons—an all-time record. Abstracts of the addresses by Messrs. Buford, Kulp and Groves, and of the reports of 3 committees, follow. Abstracts of the other addresses and reports will appear in the issue for the next week.

At the exhibit supplementing the convention, 56 manufacturers of materials and equipment employed in track construction and maintenance presented displays of their products, the exhibit being held in the exhibition hall of the hotel, directly adjacent to the meeting room of the convention. A list of the companies that exhibited, containing the names of the products on display and of the company representatives present, appears in the news columns of this issue.

In the election of officers at the closing session of the convention, A. B. Hillman, engineer maintenance of way of the Chicago & Western Indiana-Belt Railway of Chicago, Chicago, was advanced from first vice-president to president; E. L. Banion, roadmaster, Atchison, Topeka & Santa Fe, Marceline, Mo., was advanced from second vice-president to first vice-president; H. E. Kirby, assistant engineer, Chesapeake & Ohio, Richmond, Va., and a director of the association, was elected second vice-president; and E. E. Crowley, roadmaster, Delaware & Hudson, Albany, N. Y., was re-elected treasurer. Two new directors were elected—F. J. Meyer, roadmaster, New York, Ontario & Western, Middletown, N. Y., and A. L. Kleine, division engineer, Denver & Rio Grande Western, Salt Lake City, Utah; in addition, J. M. Miller, division engineer, Western Maryland, Cumberland, Md., whose term of office as a director expired with the meeting, was re-elected a director for two years, to fill out the unexpired term created by the election of Mr. Kirby as second vice-president. The report of the secretary showed 794 members of the association in good standing, including 62 new members taken in during the year.

C. H. Buford Opened Convention

In his opening address, C. H. Buford, vice-president, Operations and Maintenance department, Association of American Railroads, commended the roadmasters for their loyalty and accomplishments during the strenuous periods of the past, but, citing the gravity of the national and international situation, with the huge load that this is throwing, and will continue to throw, upon the railways, urged them to still greater effort, especially in carrying out their enlarged programs of work with minimum interference with traffic and minimum use of revenue cars for handling company materials. For about a year, he pointed out, our country has been trying in every way possible to expand production so that we can become the "Arsenal for Democracy," and, as the result, there has been an increasing demand for rail transportation to keep materials moving for increasing production schedules. "And," he continued, "unless something unforeseen occurs, there will be need for much more rail transportation in the days ahead than we are providing today."

Viewing the future in its most serious light, Mr. Buford expressed the opinion that the United States, neutrality acts, editorials and broadsides to the contrary, is on the verge of active war, if not already in it. "Uncle Sam," he said, "will listen to a lot of talk, but he will, in his deliberate way, pull off his coat and fight, and when he does, a lot of people who have been talking about production are going to quit talking and go to producing, and then things will begin to move—with its still larger demands on the railways."

The specific extent of these demands, he did not predict. In fact, in this regard, he pointed out that estimates vary widely and that no one knows just how large they will be. "This, in itself," he said, "is adding to the problems of the railways, because as the result of this uncertainty about future transportation requirements, some people have tried, and are still trying, to create a feeling of uncertainty and confusion about the ability of the railways to do a satisfactory job. For about three years," he continued, "this small group has been predicting that the railways would fail, and has urged that the government take them over to prevent this failure. But," he said, "I do not think the President or any cabinet officer wants the railways to fail or wants to take over their operation. They seem to have plenty of problems now and I do not think they are looking for more."

Continuing, Mr. Buford reviewed some of the problems of the maintenance of way forces during the World War and the recent economic depression, the successful meeting of which, he indicated, gives him confidence that the problems that lie ahead will be met with equal success. "Notwithstanding the problems of these periods," he said, "you men found ways to maintain the tracks and structures so as to permit much higher speeds than formerly, an accomplishment which," he continued, "is more outstanding than anything that has occurred previously in railway maintenance."

Urging the greatest restraint in the use of work trains and of revenue cars for company services, he said, in part, as follows:

"As business increases, transportation officers will look pretty sour when you ask for a work train because they might have some other need for the locomotive that would be required. Therefore, you should keep your request for work trains to an absolute minimum, and when you do get a train, you should see that it has a full day's work, even if it is necessary to pool the work required by several departments in order to accomplish this.

"Most roads are now working out plans to handle their current supplies of locomotive fuel with a smaller number of cars. Much is being accomplished by these efforts, and I am sure that much more will be done. However, I am not so happy about revenue cars under load with company material other than coal. While it is true that within the last four months the average detention under load at destination for such cars has decreased until it is now less than one-third of what it was, it is still entirely too high, and you men here today are responsible for a lot of it. As the need for cars increases, and it will increase, you should see that your cars are unloaded promptly. All railroads, acting through the Association of American Railroads, have taken the position that cars will not be furnished for storage. This applies to revenue shipments and it applies to all company materials as well. I hope all of you will keep this in mind and do your part."

In closing his address, Mr. Buford offered a number of helpful suggestions to maintenance men, to the end that they will be able to conduct their work with minimum interference to traffic and with maximum safety of train operation; he told them not be discouraged by rumors and "tough going," and cautioned them not to

let the pressure of their responsibilities cause them to lose sight of the need for further improvements in standards and methods of doing their work.

Greetings from the American Railway Engineering Association were extended to the convention by F. E. Morrow, chief engineer of the Chicago & Western Indiana-Belt Railway of Chicago, and a past president of the association, representing F. L. C. Bond, vice-president and general manager of the Central region of the Canadian National, and president of the A. R. E. A., who could not be present. Speaking briefly, Mr. Morrow, likened the different associations of maintenance of way and structures officers, and their individual members, to athletic teams, each with their particular part to play, if the desired results are to be achieved. "As is necessary with the players on such teams, so it is with our associations and members," he said—"they must be aggressive and versatile, each playing his respective part, while working in closest co-operation and harmony." Such characteristics of these associations, he pointed out, have aided maintenance officers through strenuous times in the past, and he looked forward to these same characteristics being of inestimable value to them in meeting the new and enlarged problems that appear to lie ahead.

H. M. Church, general supervisor of bridges and buildings of the Chesapeake & Ohio, and president of the American Railway Bridge and Building Association, brought greetings from that association. He spoke of the long-standing close co-operation that has existed between the Roadmasters' and Bridge and Building Associations, but urged still greater collaboration between its members in planning and supervising their work, and in the use of work equipment, to the end not alone of achieving still greater efficiency and economy, but also to the end of insuring adequate and still more dependable rail transportation in the interest of national security.

Speaking in behalf of the Track Supply Association, E. C. Argust, its president, and vice-president and secretary of the Morden Frog and Crossing Works, felicitated the roadmasters on the record and accomplishments of their association, and offered the fullest co-operation of members of his association in solving the problems and meeting the requirements of the maintenance-of-way forces.

In his presidential address, J. J. Clutz reviewed briefly the purpose and history of the association, and the extensive work carried on by the officers, directors and committee members during the last year, and then stressed the character and scope of the convention program, which he characterized as a "Brass Tacks" program designed to be of maximum benefit to members in the handling of the many special problems which will confront them as the result of present conditions. He also spoke of the high regard of railway managements for the association, as evidenced in part by the large attendance at the convention, and challenged those present to get the maximum benefit from the convention in the interest of their respective roads.

Must Reduce Use of Revenue Equipment in Company Services

By B. R. Kulp*

They say that the United States is not in the war, but I am not so sure of that. There is one thing, however, of which I am sure, and that is that the railroads of the country are now being subjected to traffic demands larger than ever before—as great, or perhaps greater than those made upon them during the peak year of the World War. The Class I railroads of the country have, at the present time, approximately 1,750,000 cars in service and all of them are required every hour of the day and night to handle the tremendous volume of business they are being called upon to handle.

I noted recently that government agencies and contractors involved in defense projects are unloading and releasing cars in an average of only 1¾ days per car. A recent check on our railroad of company material under load indicated definitely that we all had a job on our hands to equal this record. Since we are expecting industries to release cars promptly, it is not unreasonable to expect that you men, if necessary, will be required to equal their record in releasing cars loaded with company material. As a matter of fact, you should be able to beat their record.

It is necessary that each of you do your part in seeing that every car is kept moving in active service. To illustrate what I mean, let me take all the cars in service on all of the roads of the country today and create what we may call an average car. While this car will be in service the full 24 hr. of the day, its daily forward movement, on the basis of average performance, is only 42.6 mi., and the average time of movement is only about 2½ hr. So you see that on the average, 21½ hr. out of each 24 are lost to car movement. How can this lost time be saved and the forward movement of the average car increased?

You men who have to do with maintenance and construction can all do your part by observing the following suggestions: Analyze your work-train requirements more carefully; give the operating department adequate notice as to when and where equipment will be required; discuss your work-train requirements with your operating department officers so that the closest possible co-operation can be obtained; co-operate with other departments, combining requirements where possible, thereby eliminating additional work-train service; investigate the possibility of utilizing a regularly-scheduled train for a couple of hours, thereby eliminating the necessity for a full-time work train; secure the co-operation of your superintendents, train dispatchers and other division officers in order to keep your work trains moving with as little delay as possible; load cars to maximum capacity consistent with car capacity and safety; give preferred attention to foreign cars; avoid ordering equipment in excess of actual requirements; give consideration to the class of equipment ordered and to the direction the load is to move; order and release your work trains at points of work in time to permit the crews to tie up without unusual delays due to regular trains; exercise extra precaution to guard against all possible damage to equipment while it is under your jurisdiction; be on the alert when trains are passing to observe defective equipment; and release all equipment as soon as unloaded.

The drive to release serviceable cars from company material service to revenue service continues. A campaign on the railroad with which I am associated has reduced the time for cars under load with company material from approximately four days to two days, and we are striving to make further reductions.

If each of you will keep in mind that every piece of equipment that you might have tied up on some maintenance or construction project is required *NOW*, and bear in mind that the equipment may be necessary to transport materials of vital importance to our national defense, I am sure that you will do your part in aiding the railroads to build up a record of transportation that will be long remembered.

* Chief Engineer, Chicago & North Western, Chicago.

Rail-End-Wear—Causes and Correction

On the premise that rail-end wear makes necessary larger maintenance expenditures than any other track weakness or failure, a committee, of which C. W. Baldridge, assistant engineer, Atchison, Topeka & Santa Fe, was chairman, presented a report which carefully analyzed the different types of rail-end failures and then presented recommendations for avoiding or correcting them. After summarizing the many factors which enter into rail-end damage, it questioned, "Is it any wonder that some members of this committee, practical trackmen as they are, state that 75 per cent of track maintenance labor is applied at or near the rail joints?"

The committee admonished that to combat wear and failures of rail ends, it is necessary that, in-so-far as possible, each case of wear or failure be met with a proper remedy. Concerning the general procedure of building up rail ends to overcome wear and batter, it said in part, as follows:

"The abrasive wear throughout the running surface of the rail cannot be avoided, but might be decreased through improvement in the wearing quality of the steel by incorporating greater hardness or toughness. Rail-end batter may be, and usually is, exaggerated by a bending down of the joint bars and the rail ends. To correct such batter, the amount of abrasive wear of the bearing faces of the joint bars and of the head and base of the rails—also the bends in the bars and rails—should be taken care of, along with the surface batter. On most railways it is considered advisable to build up rail ends when the combined batter and bending show 0.03 in. or more low.

Concerning the wear of joint bars, the committee pointed out that many joint bars become worn to such an extent that the rail ends cannot be kept in good surface, and then said: "In many such cases the bars can be corrected by removing them from the track and having them reformed, or by having the worn parts of the bars restored by welding. In some cases the wear of joint bars is overcome by the use of metal shims inserted between the bars and the rail."

A large part of the report was given over to a discussion of the relative merits of spot welding and out-of-face welding of rail ends; of methods of overcoming rail-end chipping and head breaks; and of means of minimizing the number of failures of track bolts. In this latter regard, the committee said that experience has shown that it is desirable to use some form of washer on each track bolt, which has enough spring power and spring travel to maintain at least 2,000-lb. pressure per bolt on the joint bars for an appreciable distance of travel.

In closing its report, the committee suggested that more attention be given to proper track drainage, especially at and near the joints. Also, pointing out that rail-end wear makes necessary larger maintenance expenditures than any other track weakness or failure, it said that it seems that the elimination of rail ends is so desirable that much greater effort and study should be devoted to the subject of continuous rails than have yet been given.

War Department Has Large Railway Construction Program

By Col. L. R. Groves*

When the present emergency was declared, there were certain vital essentials that had to be provided—increased man power, housing facilities, and enormous quantities of supplies, arms and ammunition. To the Construction division, Office of the Quartermaster General, fell the task of providing the housing as well as the ordnance facilities. The head of this division is Brigadier General Brehon B. Somervell.

The over-all cost of the temporary emergency construction program for the fiscal year ending June 30, 1941, was in excess of $1,500,000,000. It included more than 450 projects at 250 different points scattered from coast to coast, as well as operations in Puerto Rico, Hawaii and the Panama Canal zone. First and foremost on this program was the demand for troop housing, which called for providing shelter for 1,195,000 men by June 30, 1941. On that date, new construction was available for 1,214,000 men. But troop housing alone was not sufficient. There had to be vast plants constructed for the Ordnance department if our rapidly expanding army was to be armed.

It can be readily seen, therefore, that the essential requirement in this program was speed and more speed, and I can safely say that without the facilities and efficiency of the railroads of the United States, this speed would have been impossible. Within the average construction project the railroad was a prime essential during construction activity and the construction of railway lines was generally among the first work undertaken by the contractors. The railroad was used not only to move material, but also to transport the workers back and forth over the job.

So far in the present fiscal year, construction has been authorized for four additional major camps, in addition to increases and enlargements in the present facilities. Also, 23 new ordnance plants have been authorized, as well as major additions to the old ones. The present estimated cost of the construction program has now reached a point above $2,000,000,000. As in the past, railroad transportation facilities will play a highly important part in this program.

In all of these projects, the Construction division has found occasion to build a large amount of railroad trackage. The various projects that were underway on August 2, 1941, will require the construction of a total of 1,256 miles of railroad, most of which has been completed. This figure will be greatly increased by the new contracts, as the ordnance plants alone, completed or under way, will require 1,356 miles of tracks.

The largest shell loading plant being built by the government is the Ravenna plant, at Ravenna, Ohio. This plant, occupying approximately 36 sq. mi., is served by 123 miles of tracks, with 315 turnouts, a large part of the trackage being equipped with automatic signals and centralized traffic control. During the first 11 months of construction, the Ravenna plant received by rail, 15,148 cars of construction materials. When we consider that similar large quantities of material are required at all of our other projects, it is easy to visualize the magnitude of the part the railroads are playing in our defense program.

* Chief, Operations Branch, Construction division, Office of the Quartermaster General.

Present-Day Roadway Drainage — Requirements and Methods

Pointing out that drainage problems are at the bottom of the majority of all track maintenance troubles, and that the rapid increases in speed, weight and density of traffic on the railways of the country demand a stronger track and more stable roadbed, a committee, of which W. B. Bailes, supervisor on the Southern, was chairman, presented a comprehensive report on modern roadway drainage practices and methods. At the outset of its report, the committee said that more money can be saved per dollar spent on the installation of proper drainage than for any other roadway maintenace improvements.

Surface, or intercepting, ditches along the tops of cuts, it said are very important and deserve more consideration as to design and maintenance than they generally receive. Side ditches, of course, it said are a very necessary part of the drainage system of a railroad, and in some cases, where an unusual amount of water is to be drained off, or a high water table exists, it pointed out that these ditches must be much wider and deeper than the average.

Concerning the drainage of inter-track spaces, the committee stated that any quantity of water that is allowed to stand in such spaces is a potential cause of a water pocket under the track, and should be corrected. "The most satisfactory method of disposing of this water," it said, "is by means of transverse pipe drains, installed well below the subgrade." Speaking of ballast pockets, the committee recommended that after a thorough investigation to determine their depth, size and shape, transverse drains of perforated, corrugated metal pipe should be placed at their lowest points.

On multiple-track lines, where trouble is experienced from sub-surface water in the track and both side ditches, it recommended that lateral drains beneath the track should be connected into longitudinal drains placed beneath each side ditch, or centrally between the tracks, depending upon conditions. For draining water pockets in high and wide fills, it recommended the jacking method of installing sub-surface drain pipes.

At another point in its report, the committee stressed the importance of insuring a stable foundation under turnout and crossing frogs, pointing out that if they are not kept in smooth-riding condition, they are costly to maintain. "A correct system of sub-drainage pipes and catch basins, properly installed under such frogs," it said, "will stabilize the roadbed and reduce maintenance costs materially." In fact, it said that manufacturers have figured that if frogs and crossings were installed over adequate drainage systems, their average life would be doubled.

At still another point in its report, the committee described at length a method of curing ballast pockets by filling them with cement grout under pressure. Speaking of the results of the use of this method at five points near Ft. Wayne, Ind., it reported

(*Continued on page 497*)

Acme

Members of the Emergency Board

Left to Right, Front: Chairman Wayne L. Morse, Dean of the Law School of the University of Washington; Thomas R. Powell, Professor of Law of Harvard Law School; and Huston Thompson, Attorney. Rear: James C. Bonbright, Professor of Finance of Columbia University and Joseph H. Willits, Director for Social Science of Rockefeller Foundation.

Board Told Wages Are Too Low For Work Done

Employees complete presentation of evidence for vacations with pay. All carriers, 360, named in proclamation are made parties to hearing

ALL of the 360 carriers named in the President's proclamation creating an Emergency Board are parties to the labor disputes which are being investigated by the board at Chicago. A ruling that the Board's jurisdiction is controlled by the President's proclamation was made by Wayne L. Morse, chairman of the Board, following the receipt of numerous letters and wires in which companies and individuals claimed they are not parties. The chairman set 4 p. m. each day as the time at which the Board will hear brief arguments from those contending they are not parties to the dispute. During the discussion of intervention, the chairman disclosed that no security holders or representatives of the public had appeared and that the Board would rule upon their petitions to participate when they do appear. Upon the receipt of a letter from the wife of an electrical engineer arguing for vacations with pay, the chairman asserted that the Board would not be influenced by such communications but would show them to counsel who could call the writers as witnesses if they desired.

The matter of participation has been confusing because of the various positions taken by companies prior to the creation of the Emergency Board. Some of these declined to be represented during mediation; others did not reply to the proffer of the Mediation Board's service and some individuals, such as the president of the American Short Line Railroad Association, did not participate in any of the proceedings. During mediation these companies either had "standby" agreements with the Mediation Board or said they would abide by the decision reached in mediation. The position taken by many of the smaller companies was due to their reluctance to participate in the expenses of the conference committees which represent about 130 of the class I railroads.

The ruling of the Board that all companies mentioned in the proclamation are parties to the dispute, is based upon the fact that strike ballots were sent to some or all of the employees of all of the 360 companies or individuals. Since the strike ballot sent out by the 14 non-operating brotherhoods sought a vote for a strike, the Board took the position that all companies and individuals mentioned in the proclamation are parties because the taking of a strike vote among their employees created an emergency. Some of the companies which contended in letters that they do not fall under the Railway Labor Act are the Western Fruit Express Company, the Fruit Growers Express Company, the Burlington Refrigerator Express Company and the Charleston, S. C., Public Utility Commission, the Addision & Miller Co., the Hudson & Manhattan and the Galveston Wharves. W. R. McMunn, superintendent of rolling stock, and H. E. Christian, counsel for the Merchants Despatch Transportation Corporation, put in an appearance for that company.

The United Transport Service Employees of America, the membership of which includes "red caps," asked the Board to take jurisdiction over its dispute with certain railroads. The Board ruled that since this organization was not named in the proclamation the Board was without authority to act.

Robert G. Sprague, attorney for the Toledo Peoria & Western, presented the case of this railroad. He said that the International Brotherhood of Firemen, Oilers, Helpers, Roundhouse & Railway Shop Laborers had re-

fused in June to negotiate rates of pay and rules and working conditions at the same time, had refused on July 2 to negotiate or even discuss the merits of a new demand made on June 12 for a blanket increase of 30 cents an hour with a minimum of 70 cents, that the company had stated its position to the National Mediation Board on July 23 in reply to its request, that nothing further had been heard from this Board, and that the brotherhood had informed this Board that a strike vote had been taken when none had. Mr. Sprague charged that the methods employed by this brotherhood were improper and in violation of the meaning and intent of the Labor Act and suggested that the Emergency Board ask the Mediation Board to make an investigation of the strike vote on the T. P. & W.

Mr. Sprague called attention to the other controversies before the Emergency Board in which the T. P. & W. is indirectly involved and contended that rates of pay and rules and working conditions should be negotiated and considered together. "Our position in this respect," he said, "applies not only to shop laborers but to all classes of employees, and particularly to those in train and engine service, where existing, burdensome and unnecessary rules and working conditions add to transportation costs and prevent efficient operation." He asked that special consideration be given this road because of the unusual conditions confronting it. Mr. Sprague was given until September 29 to file a statement.

C. A. Miller, vice-president and general counsel of the American Short Line Railroad Association, appeared for 19 short lines, including one class I and 18 class II and class III railroads. These railroads, he stated, had agreed to mediate but not with the class I roads because employment conditions on the former are so different. He said that short line employees are substandard men in that many have been dismissed from class I railroads because of disability, that the roads he represented had not been given a chance to talk with the Mediation Board, that a strike vote had not been taken and that, therefore, these railroads were not parties to the dispute before the Emergency Board. He asked that the order which made his companies parties be amended. "If, however," he said, "jurisdiction is maintained, these railroads must have a separate hearing which will occupy one day." Chairman Morse ordered Mr. Miller to name the railroads upon which no strike vote was taken.

To Write Report from Record of Hearings

Following a conference on procedure on September 23, with I. Leo Sharfman, professor at the University of Michigan and T. W. Van Metre, professor of transportation of Columbia University, the Board announced that it will write the report which it will submit to the President from the record which the parties to the hearing are making and will not call before it, in executive session, consultants of its choosing. The Board, however, reserves the right to make investigations of government statistics, documents or records if it believes such records will be of value to it in preparing its report.

The Board will appoint technicians and statistical assistants for such clerical work as rearranging statistics and other data. On September 23, the chairman announced that two such assistants, Robert D. Gray, supervisor of engineering defense training courses in production engineering supervision at the California Institute of Technology, and H. Gregg Lewis, instructor in economics at the University of Chicago, had been appointed. The Board's staff also includes an executive secretary and a stenographer.

The 14 non-operating brotherhoods, from the testimony being presented, are basing their wage case upon increased output per employee, the wage relationship with other industries, cost of living and increased earnings of the railroads. The presentation of testimony in support of the demand of the 14 non-operating brotherhoods for a minimum wage of 70 cents per hour as the lowest rate to be paid in the industry and with other corresponding increases which would provide rates up to $1.15 per hour for highly skilled workers, began on September 19 upon completion of the presentation of evidence in support of their demand for vacations with pay. Although thus far there have been few controversies over the testimony presented by the unions, a conflicting opinion as to the interpretation of basic facts and statistics is apparent. Among the subjects which promise to enliven the hearings because of conflicting opinion are the mid-month count of employees, average compensation per employee, the Interstate Commerce Commission's accounting procedure and the carrier's ability to pay.

Although increased output per employee was stressed as a reason for increasing pay, the employees did not take credit for all of the increase, admitting that expenditures for improvements, larger locomotives and cars and new machines brought about some of the increased output. L. E. Keller, research director of the Brotherhood of Maintenance of Way Employees, in testifying to show the increased output of employees, said that while the number of employees had decreased from 2,022,832 in 1920 to 1,026,927 in 1940 and while the number of hours worked had decreased from 5,446,741,000 in 1920 to 2,617,008,000 in 1940, the revenue freight ton-miles had dropped only from 410,306,210 in 1920 to 373,224,822 in 1940, with the result that the revenue ton-miles per employee amounted to 363,428 in 1940 as compared with 202,838 in 1920. At the same time, he said, the number of employees per mile of road decreased from 8.6 in 1920 to 4.4 in 1940, the hours worked per mile of road declined from 23,155 in 1920 to 11,242 in 1940, and the compensation per mile of road fell from $15,652 in 1920 to $8,439 in 1940.

He challenged the carriers' claims of increased efficiency by contending that what is really meant is that total compensation has been reduced, with the result that while wages represented 63.2 per cent of operating expenses in 1920 and 63.6 per cent in 1940, they were only 45.7 per cent of operating revenue in 1940, compared with 59.6 per cent in 1920.

Mr. Keller introduced the Lorenz formula for transposing passenger-miles into freight ton-miles, using a ratio of three to one. The resulting "traffic units," he said, amounted to 431,699 per employee in 1940, compared with 272,317 in 1920 and 226 per dollar of compensation in 1940, compared with 150 in 1920. Wages, he testified, amounted to $4.43 per 1,000 traffic units in 1940 and $6.68 in 1920. Some of Mr. Keller's contentions were challenged by D. P. Loomis, assistant general counsel of the Delaware & Hudson, and counsel for the Carriers Joint Conference Committee, during cross examination.

When asked by J. C. Bonbright of the Board whether the workers could help save operating costs, Mr. Keller cited testimony by Senator Burton K. Wheeler before a Senate committee in 1938 to the effect that the railroads are wasting a million dollars a day but contended the waste was not in operations but in financing. Mr. Keller referred to a $20,000,000 purchase of stock in the Wabash by the Pennsylvania as an illustration. The testimony was challenged by J. Carter Fort, chief counsel for the

Carriers' Joint Conference Committee, and the Board ruled that because of the magnitude of the record of the Senate committee investigation the Board could not include that record in its study and that therefore the reference by Mr. Keller would not be influential.

The wage case of the non-operating brotherhoods was introduced by B. J. Jewell, president of the Railway Employees Department of the American Federation of Labor, who contended that the present wages of the non-operating brotherhoods are at about the 1920 level. He also stated that wages in other industries are two or three times as much as those of the railroads, that other employees have participated in the general upswing of business while railroad employees have not, that railroad wages were behind those of other industries in 1937 and are further behind now, that the minimum wage on railroads is 36 cents while that in other industries is 75 cents and that railroad workers must work 48 hours a week before overtime applies while employees in other industries are paid time and one half after 40 hours.

Allen P. Matthew, general counsel for the Western Pacific and for the Carriers' Joint Conference Committee, drew admission from Mr. Jewell that demands for the increase in pay in 1937 were timed with improvement in business, that this increase raised some of the pay levels of the union members to record levels, and that the prosperity forecasted in 1937 and used as an argument for pay increases did not materialize in 1938. Mr. Matthew brought into the record estimates that the cost of the increase for the 14 non-operating unions alone would be $600,000,000 annually and that the increase in payroll taxes would add another $36,000,000. Mr. Jewell agreed with Mr. Matthew that the railroads experienced an extraordinary period of recession in 1930-40 and that earnings were lower, but said he did not know what this decline did to railroad credit. He agreed that the restoration of railroad credit to the soundest possible basis was of major importance to labor as well as to management and owners, and that the money which the railroads have borrowed from the Reconstruction Finance Corporation and others must be repaid before the credit rating of the last decade can become a basis for new financing.

R.R. Wages Compared with Those of Other Industries

A comparison of railroad wages with those of other industries was made by David Kaplan, chief economist of the International Brotherhood of Teamsters. He based his studies upon average hourly earnings, the total pay divided by the total hours paid for, contending that this basis is the only valid method since no agency has compiled actual wage rates. He said annual earnings figures were fickle since they change with the wage rate and the number of hours worked and are affected by the method of counting employees. He testified that the average hourly earnings of the employees represented by the 14 non-operating brotherhoods had dropped from 65.73 cents in the second half of 1920 to 63.75 cents in 1940 while those of employees in the manufacturing industries had increased from 60.6 cents in 1920 to 73.9 cents in 1940 and to 81.5 cents in June, 1941. He also presented a tabulation of the prevailing average hourly earnings of employees in a selected list of industries which showed the following: agricultural implements, $0.904; automobile, $1.114; boot and shoe, $0.59; chemical, $0.839; cotton, $0.55; electrical, $0.906; furniture, $0.752; hosiery and knitting, $0.566; iron and steel, $0.992; leather tanning, $0.711; lumber and mill, $0.796; meat packing, $0.752; paint and varnish, $0.793; paper and pulp, $0.733; paper products, $0.662; printing, book and jobber, $0.839; printing, newspapers and magazines, $1.002; rubber manufacturing, $0.92; silk manufacturing, $0.531; and wool manufacturing, $0.689. He also compared the hourly wages of some occupational groups in the railroad industry with those in other industries, including a Navy yard, the Tennessee Valley Association, the shipbuilding industry, the building trades, automobile industries and the steel industry to show that the former were the lowest.

Testimony on Vacations with Pay Completed

Testimony by the 14 non-operating brotherhoods in support of vacations with pay was concluded on September 19 or within three days after the hearings started. The demand asks that all employees who have completed one year's service and who are regularly employed, shall be given two consecutive weeks of vacation with pay annually and that all other employees, upon the completion of one year's service, shall be given an annual vacation of one working day with pay for each month during which they earned compensation during the preceding calendar year. During the vacation period, the basis of pay for hourly rated employees shall be eight times the hourly rate for the service last performed prior to vacation and for employees paid on a piece work, daily or monthly basis, it shall be at the regular daily rate for the service last performed prior to the vacation. The vacation period shall generally be between April 1 and September 30 and employees in each seniority district shall be entitled to preferential vacation dates consistent with the requirements of the service and their standing on the seniority rosters, provided however, that by agreement between the committee representing the employees and the management, arrangments may be for the granting of vacations to individual employees at times outside the limits specified.

Testimony was designed to show that vacations with pay would not cost the railroads very much, that there is a vacation trend generally in other industries, and that employers as well as employees benefit from vacations.

As reported in the *Railway Age* of September 20, L. E. Keller testified that vacations for 571,266 non-operating employees would cost the railroads $31,651,702. In contrast the railroads have contended that the cost would be $40,000,000.

George M. Cucich, research director of the Railway Employees' Department of the American Federation of Labor, said that vacations with pay are almost universally granted to "white-collar" employees and have been widely extended to wage earners. The railroads are the only major industry, with the possible exception of the construction industry, which has failed to grant vacations with pay to a substantial proportion of its employees, he said.

Bureau of Statistics Survey Cited

According to a survey made by the Bureau of Statistics of the U. S. Department of Labor, he said, 3,359,281, or 38.6 per cent of the 8,500,000 wage earners in the manufacturing industries, were covered by paid-vacation plans in 1937. The chemical industry, including petroleum refineries, ranked first with 84.6 per cent of its wage earners under paid-vacation plans. The iron and steel industry ranked second with 75.9 per cent, the rubber industry third with 71.2 per cent. Others are the machinery industries with 67.8 per cent, and the food and

non-ferrous metal industries, each with 63.9 per cent of its wage earners under paid-vacation plans.

A Conference Board survey, he continued, covering 2,700 business and industrial establishments with nearly 5,000,000 employees, showed that 93.8 per cent of the companies provided annual vacations to salaried employees and 46.4 per cent to hourly-paid employees in 1940, compared with 79.8 per cent and 17.9 per cent respectively in 1935. Upon cross examination, Mr. Cucich admitted that the securing of relief workers during the vacation period would be a problem.

W. M. Homer, research director of the order of Railroad Telegraphers, presented an exhibit entitled "Aspects of the Vacation Question which contained remarks by a number of persons in support of vacations." He pointed out that the railroads claim it is not practical or desirable to grant vacations to their employees in this time of "national emergency" but that England, which is actually in the war, continues to give its workers vacations on the ground that they are necessary to maintain efficiency and increase production.

One of the questions that was raised by the Board was, "Why have not the five operating brotherhoods sought vacations also?" Counsel for the non-operating brotherhoods said that this group could not answer for the five operating brotherhoods but that time off under working arrangements of this group was probably a factor.

Mid-Month Count Attacked

So important is the average annual compensation phase of the controversy, that the 14 non-operating brotherhoods introduced seven sizeable exhibits to show the effect of the I. C. C. middle-month count of employees basis, the I. C. C. "who received pay" basis and the basis using the Railroad Retirement Board statistics on figures of average annual compensation. Mr. Keller returned to the stand on September 23 to attack the mid-month count basis which the carriers have always used to determine average annual compensation and to demonstrate the various answers that can be secured with each basis.

He termed the mid-month basis fantastic for he said it hides the irregularity and instability of employment. The fact that railroad employment is more irregular than is shown by the "over all" statistics, he said, is significant because the railroads claim that the regularity of railroad employment justifies their paying lower wage rates than are paid in industries where employment is seasonal or is irregular for other reasons.

In his analysis of the three methods of calculating, he contended that employees and compensation vary in each month, and in the totals for the year. When he applied his interpretations to the 71 occupational classifications represented by the 14 non-operating brotherhoods, the three count-bases showed the following numbers of employees in 1939: mid-month basis, 692,903 employees; "who received pay" basis, 774,086 employees; and the basis using Railroad Retirement Board statistics, 1,008,457 employees. The average annual compensation for these employees was determined by dividing the $1,068,334,269 they received by the number of employees determined under the three bases. The mid-month basis, he said, showed an average pay per employee of $1,542 in 1939; the "who received pay" basis, $1,380; and the basis using Retirement Board statistics, $1,059. By further interpolation, he indicated that 585,777 employees in 24 classifications, or 58 per cent of the total of these 24 classifications, failed to get work in each month. Their average earnings were $1,172, $989 and $646 under each basis respectively.

In another exhibit he established a ratio between employees and traffic units in 1920 and applied it to the traffic units of 1940 to show the number of employees that had been taken off the payroll. The exhibit was also intended to show the increased output of employees. In 1920, he said, 2,022,832 employees were used and in 1940 1,026,927 but if the traffic units per employee in 1920 were applied to the total traffic units of 1940, 1,627,862 employees would have been required. This, he said, indicated a decrease of 601,035 employees. The decrease in work days amounted to 327,126,000 man-days, the difference between the extended amount of 547,937,826 man-days and the actual figure of 327,126,000 man-days in 1940.

Cross examination by Mr. Fort challenged the interpolations made by Mr. Keller. The witness admitted that if his deducted average earning figure were applied to the 1,627,862 employees that would have been required under Mr. Keller's interpolations to handle the 1940 business, the payroll of the railroads in that year would have been $3,112,663,000. Mr. Fort also showed that the increased efficiency referred to by Mr. Keller has been used by the railroads to maintain the wage level and had not been reflected in the rate of return, in the earnings of the railroads or in a higher wage level. Mr. Fort also disclosed that 87.5 per cent of the group of employees reported by the Retirement Board as having an income of less than $50 a year also received income from other companies. The average yearly wages of the railroad employees who worked 12 months in 1939, according to the Retirement Board's figures, was $1,844 while that determined on the mid-month count basis was $1,887.

Mr. Cucich returned to the stand on September 23 to testify on the relationship of employment variations and shrinkage of pay to the rise in living costs in periods of war and emergency. He said that the wholesale price index of 100 in 1913 rose to 102.7 in December, 1914, and to a peak of 211.3 in June, 1920. During this war the basis of 100 in August, 1939, has risen to 102.8 for 1939, to 104.8 for 1940, to 107.7 in January, 1941, to 108.7 in March, to 120.4 in August and to 121.3 for the week ending September 6. At the end of July, 1941, he said six items of goods purchased by employees had risen 6.7 per cent compared with August, 1939. This figure is the average of food, 14 per cent; clothing, 3.9 per cent; rent, 1.7 per cent; fuel and light, 4.9 per cent; house furnishing goods, 6.6 per cent, and miscellaneous, 3.3 per cent.

H. A. Bacus, research director of the Brotherhood of Railway Clerks, completed the presentation for the 14 non-operating brotherhoods on September 25, when he testified as to the railroads' ability to pay the cost of the wage increase and vacations with pay.

The five operating brotherhoods began the presentation of evidence in support of their demand for increased pay on September 25.

"TRAVEL TIME" RADIO INTERVIEWS which have been broadcast by Paul Hodges for some time from the Cincinnati (Ohio) Union Terminal to a large audience in the middle West, will now be broadcast directly from the train concourse of Pennsylvania Station, New York. The stations are WLW, Cincinnati and WMCA, New York, and the time is 11:45 p. m. to midnight every Monday, Wednesday and Friday. Passengers on their way to and from trains will be asked their impressions of New York, how they enjoyed their trip and other questions of human interest.

This Big Inter-City Tractor and Trailer Gives G. M. & O. Patrons a Fast, Flexible Service

Building a Co-ordinated System

The Gulf, Mobile & Ohio proceeds vigorously to parallel its railway with truck routes

THE Gulf, Mobile & Northern was a pioneer in the use of rail-highway co-ordinated service as to both buses and trucks, having received the first truck-operating certificate awarded by the State of Mississippi. Since its consolidation last year with the Mobile & Ohio, the new company, the Gulf, Mobile & Ohio has proceeded vigorously with a campaign that has as its ultimate aim the complete paralleling of its rail lines with highway routes in the interest of improved service.

The Highway Developments

The Gulf Transport Company and the Mobile & Ohic Transportation Company, the highway transport subsidiaries of the G. M. & O., operate 86 highway freight units over 1,700 route miles daily. This has grown rapidly in the last year. For example, the M. & O. line, which had only 70 miles of truck operations prior to the merger, now has more than 900 route miles, with applications on file for still further expansion.

The transport subsidiaries give highway service to some 318 communities, of which 155 are in Mississippi, 83 in Alabama, 36 in Tennessee, 29 in Illinois and 15 in Louisiana. In accordance with the varying certificates, the character of traffic which may be handled on the various routes differs. All of the routes are authorized to handle intrastate traffic, both under truck bills of lading at truck rates and in entire or partial substitution for rail service under rail bills of lading at rail rates. However, insofar as interstate traffic is concerned, some of the routes are restricted to handling business that has had a prior or will have a subsequent rail haul. Four of the routes are not authorized to handle any interstate traffic whatever, but applications for such rights are pending.

The Truck Routes

As shown on the accompanying map, the truck routes extend over highways paralleling virtually the entire system from St. Louis on the north to New Orleans and Mobile on the Gulf Coast and to Montgomery, Ala., in the southeast, serving many important intermediate cities such as Cairo, Union City, Humboldt, Jackson, Tenn., Dyersburg, Corinth, Tupelo, West Point, Starkville, Columbus, Meridian, New Albany, Houston, Louisville, Union, Laurel, Jackson, Miss., Columbia, Tuscaloosa and Prattville. The territory in Louisiana adjacent to the former New Orleans-Great Northern which was taken over by the G. M. & N. some years ago, is served by two routes out of Bogalusa, La.

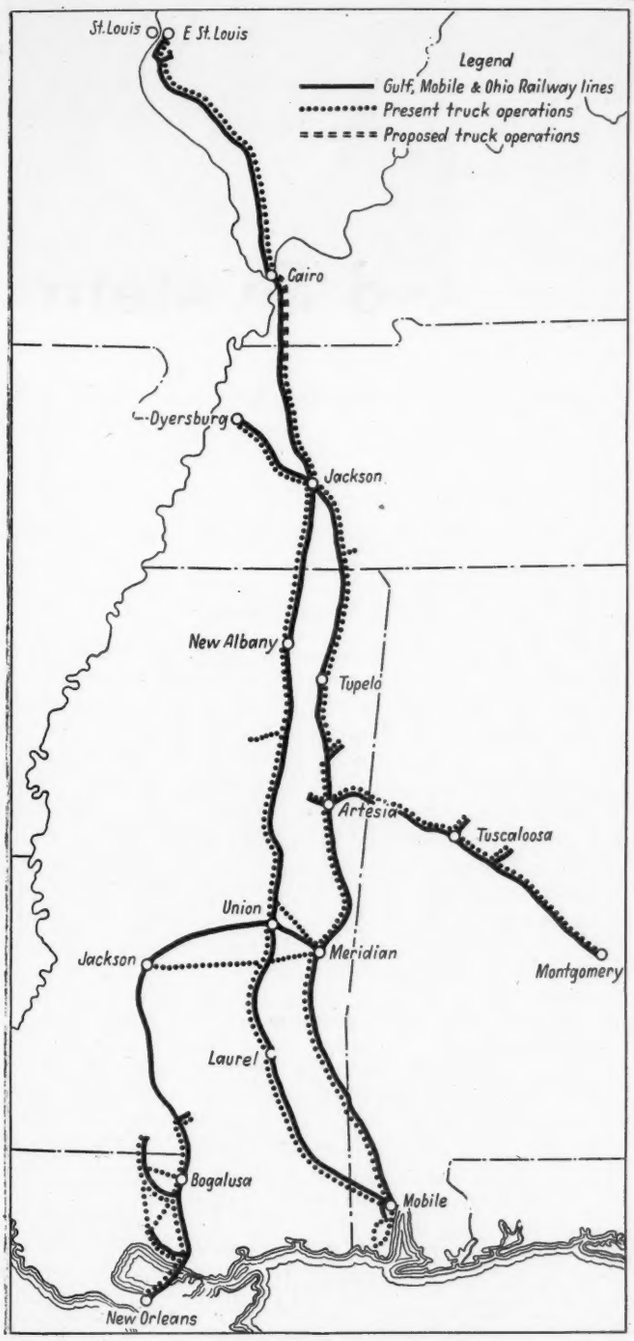
Service

The G. M. & O. has long been an adherent of the theory of giving the customer what he wants, and these truck routes, as well as the co-ordinated rail schedules, were all set up after conferences with shippers and receivers to determine what best suited their needs. Insofar as possible the trains and trucks arrive in the cities and towns at the time the shippers want their merchandise, and it has been the experience of the G. M. & O. that small schedule adjustments will frequently do much toward turning a hitherto hostile shipper or receiver into a friend. This efficient service for G. M. & O. patrons combines the speed and dependability of rail transporta-

tion with the flexibility of highway transportation—the train for the long haul, the truck for the short haul and local deliveries. Trucks, too, are utilized for the handling of mail and express to eliminate delays to the G. M. & O. streamlined Rebel trains.

Feeder Routes

The importance of feeder routes between towns where there is no railway service has been thoroughly brought out by the G. M. & O. co-ordinated operations. Trucks operated on three such feeders during 1940 handled 109,091,157 lb. of freight, on practically all of which the rail line also received the revenue for a long haul in freight cars. The G. M. & O. would have received a rail haul on less than 10 per cent of this business if these feeder truck routes had not been operated.



Co-Ordinated Truck Routes Practically Parallel the G. M. & O.

A Group Showing Various Types of Gulf Transport Trucks

The route between Selmer, Tenn., and Savannah, 21 miles, instituted in January, 1937, handled 61,792,456 lb. during 1940. There are no fixed schedules on this route, the trucks operating in frequent daily shuttle service. Until the installation of this service, Savannah had to depend upon irregular boat schedules on the Tennessee river and inadequate truck service. Among other freight handled from Savannah by truck are approximately 100 carloads per month of lumber and poles, all of which receives a subsequent rail haul.

The feeder route between Houston, Miss., and Calhoun City, 21 miles, was started by the G. M. & O. on October 1, 1939, at the request of the local citizens after the Okolona, Houston & Calhoun City, a locally owned railroad, was forced to abandon operations entirely because of financial difficulties. In 1940, 45,972,272 lb. of freight was handled on this route. Merchandise traffic on this route is handled by a truck leaving Houston at 7 a. m. and arriving at Calhoun City at 8 a. m., after serving six local stations enroute. This truck leaves Calhoun City on its return trip at 8:30 a. m., arriving at Houston at 9:30 a. m. In addition, frequent additional service is provided for traffic moving into or out of Houston in carload lots.

The feeder route between Mobile, Ala., and Bayou La Batre, about 25 miles long, was not established until October 3, 1940, yet, in less than nine months to July 1, 1941, this route handled 12,089,516 lb. of freight. One daily round trip schedule is maintained on this route, and frequent additional service is provided for carload traffic.

The soundness of the G. M. & O. highway policy is reflected in quicker service, increased traffic, development of new territories and markets, increased employment, release of badly needed first class box cars monthly for carload traffic, including defense materials, and expedited movement of trains. This policy will be continued and extended as rapidly as possible.

WOOD FUEL IS NOW BEING USED extensively on the locomotives of the Swedish State railways and privately-owned roads in the country. This has been made necessary by two complementary factors—a tremendous increase in traffic, due to lack of motor fuel for highway vehicles and curtailment of coastwise shipping, and a shortage of coal. In order to conserve equipment and fuel for important freight traffic, passenger services have been drastically reduced. Certain lines which ordinarily enjoyed frequent, fast express-train schedules now have only three or four passenger runs a week. Speeds have also been drastically reduced and all reduced fares and excursions have been withdrawn. Effective June 15, all sleeping and dining cars were discontinued.

Deramus Elected K. C. S. President

Charles Peter Couch Elevated to Chairmanship of Board

WILLIAM N. Deramus, executive vice-president of the Kansas City Southern and the Louisiana & Arkansas, has been elected president of the Kansas City Southern, in place of Charles Peter Couch, who has been elected chairman of the board, succeeding his brother Harvey C. Couch, whose death on July 30 was reported in the *Railway Age* of August 2. Mr. Deramus, in stepping up to the presidency of the K. C. S. climaxes a railroad career begun in 1903, since which time he has steadily advanced through many positions in the operating department of that road. His railway experience has provided him with a background well fitting him for his new position.

Charles Peter Couch

William N. Deramus

The election of Mr. Couch as chairman of the board to succeed his brother, was a natural step, since the two brothers have been closely associated throughout their careers and worked together to establish the Couch utility system in Arkansas, Louisiana and Mississippi and later worked together to acquire the Louisiana & Arkansas and then the Kansas City Southern, welding them into one large and important railway system.

The Kansas City Southern system operates 879 miles of lines, consisting principally of the main line of the K. C. S. from Kansas City, Mo., to Port Arthur, Tex., the shortest route between Kansas City and the Gulf of Mexico, and with the main line of the L. & A. from Shreveport, La., to New Orleans, La., provides a through route from Kansas City to New Orleans.

The K. C. S. is primarily a heavy-freight carrier, although its "Flying Crow," which operates between Kansas City and Port Arthur is well known in the Middle West, and more recently, double-daily passenger service has been provided between Kansas City and New Orleans via Shreveport, over which route the new streamlined "Southern Belle" operates intact between these two cities.

Much of the K. C. S. freight traffic is long-haul business received in interchange. However, it also originates considerable traffic on its own lines especially from the Rodessa oil field in Northwestern Louisiana and the lead mines and industries around Joplin, Mo., and Pittsburg, Kan. Its large terminal facilities and properties at Kansas City and Port Arthur are especially valuable.

Recently the most important development of these properties has been the unification of the K. C. S. and the L. & A. into one system with a total of 1,690 miles of lines. This was brought about largely by the vision and efforts of the late Harvey C. Couch and his brother Charles Peter Couch. Shortly after the Couch interests assumed control of the L. & A. in 1928 they began to plan for its consolidation with other lines to form a larger unified railroad system and their attention was eventually directed toward the Kansas City Southern. Control of that road was obtained in 1937 and approval of the merger of the two into one system was secured from the Interstate Commerce Commission on May 3, 1939.

Both the K. C. S. and L. & A. have weathered the recent depression years without defaulting on any of their fixed charges, despite the fact that total revenue from railway operations on the K. C. S. declined to $9,360,247 in 1933 and then increased to $14,174,834 in 1937 and to $14,382,379 in 1940.

Charles Peter Couch was born in Calhoun, Ark., on August 16, 1890, and attended the public schools in Magnolia and Milner, Ark. In 1906, at the age of 16, "Pete" Couch, deciding it was time for him to go out in the world and make his mark, wrapped a change of clothing in a bundle and set out for Gibsland, La., where his brother Harvey had located headquarters for his telephone company. After about a year's employment as fireman on the Louisiana & Northwest, he joined his brother in the telephone business. Starting at the bottom—digging post holes—he became successively a "straw boss," foreman and superintendent of construction, building hundreds of miles of line in Arkansas, Louisiana, Oklahoma and Texas. In this experience he gained first-hand knowledge of people and conditions in this territory, through which the K. C. S. runs.

When the Couches disposed of the telephone system they had built up, they retained the creosoting plant, of which C. P. Couch was foreman from 1911 to 1914. In

the latter year he re-joined Harvey in the development of an interconnected power system that is now the Arkansas Power & Light Co. and which is tied in with the systems of the Louisiana P. & L. and the Mississippi P. & L., also established by the Couches and associates. As superintendent of construction for the former company in Arkansas, C. P. Couch built all lines constructed by the company from 1914 to 1920. Taken out of the construction department in 1921 because of a slackening in building new lines, Mr. Couch was made manager of the Arkadelphia-Malvern district of the power company. In 1923, he was sent to Mississippi as vice-president and general manager of the Mississippi Power & Light Co., founded and headed by brother Harvey.

When the Southern Ice & Utilities Co. was organized in 1927, to operate ice plants in Arkansas, Texas, Oklahoma and Louisiana, C. P. Couch became its vice-president and general manager and directed the affairs of the company until April, 1930, when he resigned to become vice-president and general manager of the Louisiana & Arkansas, of which his brother Harvey was then president. In 1932, when Harvey Couch resigned as president of the road, C. P. Couch was elevated to the presidency, and in August, 1939 was elected president of the K. C. S. as well.

William N. Deramus was born at Coopers, Ala., on March 25, 1888, and began his railroad career as a telegraph operator on the Louisville & Nashville in March, 1903. After three years with the L. & N., he was attracted to a similar job with the Atlantic Coast Line and a few months later went with the Southern as operator. This road promoted him to dispatcher in 1907. In November, 1909, he joined the Kansas City Southern as telegraph operator at Pittsburg, Kan., and within a few months he was promoted to dispatcher and transferred to Heavener, Okla. One year later, still as chief dispatcher, he was returned to Pittsburg, but within three months he was promoted to superintendent of car service, at Kansas City, Mo.

In January, 1925, he was appointed superintendent of the Southern division of the road, with headquarters at Texarkana, Tex., a position he held three years. His work here won him promotion to general manager in 1928. In November, 1934, he was elected vice-president and general manager, which position he held until January, 1939, when he was promoted to executive vice-president. In August, 1939, his jurisdiction in this post was extended to include the L. & A. as well.

Roadmasters Tackle Problems of a New, Intensive Era

(*Continued from page 489*)

that the cost of the work was $2.52 per lineal foot of track grouted, and that carefully-kept maintenance records before and after the work showed a saving of 82 per cent in maintenance labor following the grouting operations.

Completing its report, the committee described a method of driving ties or poles into the subgrade at the ends of the ties to stabilize the roadbed, pointing out that during the last five years, several hundred miles of track have been treated in this manner in Texas alone. In some cases, the return on the costs of this work was said to have been in excess of 50 per cent per annum.

Recent Developments in the Renewal of Ties

The report on this subject, which was prepared by a committee of which F. G. Campbell, assistant chief engineer, Elgin, Joliet & Eastern, was chairman, set up at the outset the large opportunities for increased economy in carrying out tie renewals, pointing out that in spite of the noteworthy reductions that have been brought about in annual tie replacements on the railways of the country in recent years, the cost of cross and switch ties, plus the cost of the labor required for their installation, is still the largest single item of roadway expense on most roads.

In the first part of its report, the committee described the relative merits of spot and out-of-face renewals. Relative to the cost of one of these methods over the other, the committee found little consistent and reliable data, pointing out that most railroads, unfortunately, are sadly lacking in usable data on the cost of tie renewals, as well as on the costs of most other maintenance operations. Concerning tie renewal organizations, the committee stated that, whereas most spot renewals are today carried out by section gangs, with certain notable exceptions, most tie renewals in conjunction with resurfacing operations are made by specialized or extra gangs. "Probably the decision as to whether to use specialized gangs in tie renewals," it said, "does and should depend almost entirely upon local conditions."

In a part of its report dealing with mechanical aids for tie renewals, the committee described four types of tie pullers that are available, and also a tie bed shaper and a tie saw. It said that it felt that the importance of these machines is not so much in their present use, as it is in the probability of their further development.

Summing up the results of its studies, it said, in part, as follows:

"From our investigation, we must conclude that at the present time the progress in the art of tie renewals has not kept pace with the marked improvement in tie materials. This in no wise means that improvements in the arts have been negligible, nor does it mean that sincere effort and thought, especially in the last decade, have not been given to the development of more economical and better methods of making tie renewals. During this period, sincere effort has been made to carry out tie renewals with the least detrimental effect on the general track structure, and much has been accomplished toward that end."

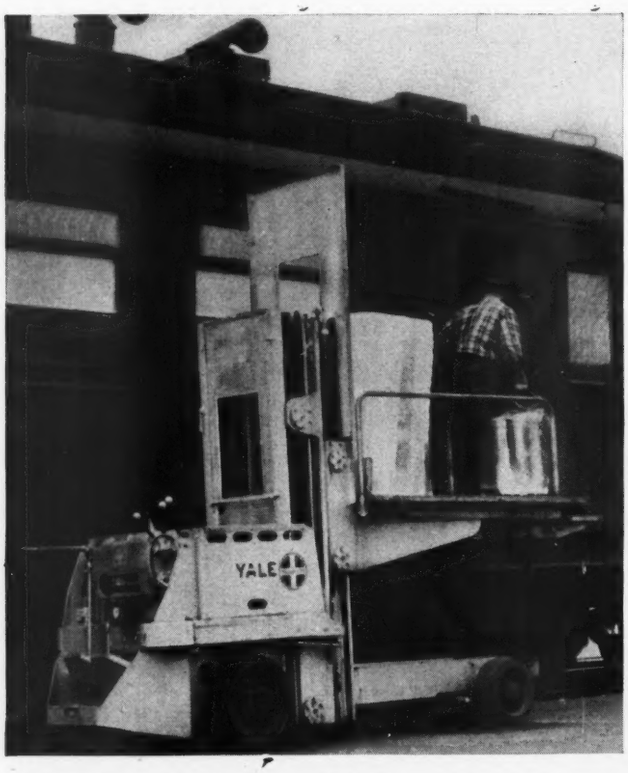
* * *

Flying Yankee Carries Victory "V"

Engineer C. H. Richards polishes up a large red, white and blue victory emblem recently placed on the front of the streamlined "Flying Yankee" of the Boston & Maine and Maine Central. The shining emblem accompanies the train on its daily run of more than 740 mi. through Massachusetts, New Hampshire and Maine.

High-Lift Truck for Icing Passenger Cars

RAILWAY passenger cars, particularly dining cars on long runs, require the replenishment of their supply of ice at intermediate station stops. The ice is carried in bunkers located in the roofs of the cars and each car usually has from two to four bunkers varying in capacity from 300 to 900 lb. per bunker. Also, a supply of ice is carried in the dining-car kitchen at floor level. The usual practice in icing such cars is to haul ice



Electric Storage-Battery-Operated Truck with Icing Platform at Intermediate Level

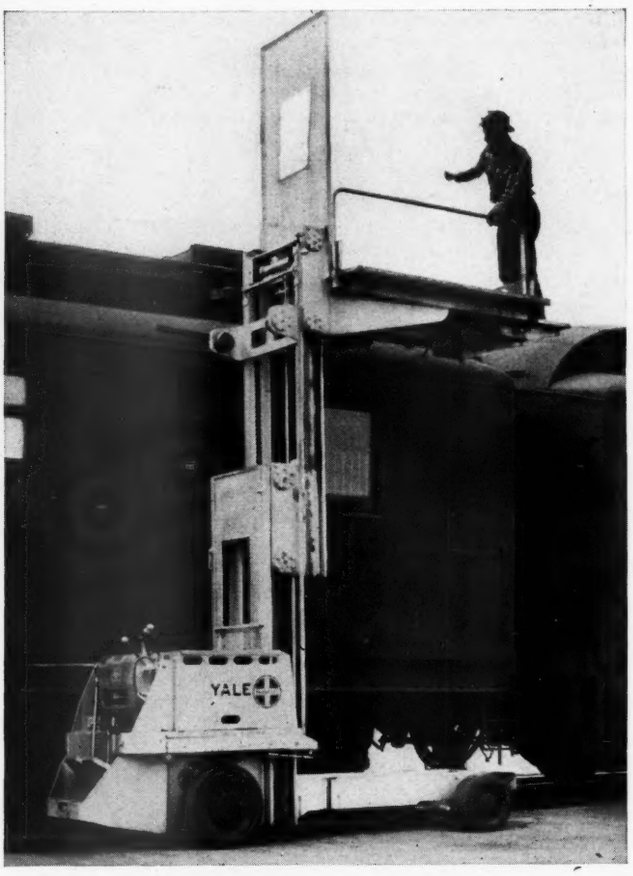
in full cakes of 300 lb. each on a baggage truck alongside the car, one man on the truck breaking the ice into about 10-lb. pieces and tossing them to a man on the car roofs who drops them into the bunkers. This method is slow and there is also a risk of ice chunks falling upon near-by passengers, or possibly breaking car windows.

To reduce the time of icing cars and also lessen the possibility of personal injuries, electric lift trucks of special construction have been introduced, the one illustrated being used at the Albuquerque, N. M., passenger station of the Atchison, Topeka & Santa Fe. It consists of a Yale & Towne 4,000-lb. telescopic electric storage-battery truck with remote control from the loading platform for raising and lowering. This platform is 38 in. wide by 66 in. long by 16 in. high in the low positjon. It has a maximum height in the fully-raised position of 42 in. The truck platform is equipped with a folding catwalk and removable safety handrail on each side. The overall dimensions of the truck are 148 in. long by 56 in. wide by 95 in. high in the collapsed position. It has 20-in. by 5-in. drive wheels and 15-in. by 7-in. trailer wheels, spaced 80 in. on centers. When loaded with ice, the platform will support nine cakes, or about 2,700 lb.

This truck is employed in the icing of four Santa Fe daily trains and five semi-weekly trains, also certain refrigerator express cars. Each train has from one to three cars requiring icing. The average amount of ice supplied to each train is about one ton, and the number of times the platform is lifted and run down and lifted again varies from three to five for each car iced. The platform is raised to its high position in 44 sec., and lowered in 22 sec. The platform is lowered each time the truck is moved to another location.

The use of this truck has resulted in the saving of eight man-hours on each of the two shifts where the truck is used. It has also reduced the time and cost of moving ice from the ice house, which formerly took about an hour, with two or three men to push the baggage truck. By means of the electric truck, one man can make the run in about 15 min. The use of this truck for icing express cars has saved taking these cars from the train to the ice house. Specific figures on the amount of this saving are not available.

Ice for Pullman and coach car fountains is obtained by porters from small ice carts, about 3 ft. by 5 ft. in



Yale & Towne High-Lift Electric Truck Used in Icing Santa Fe Passenger Cars at Albuquerque, N. M.

size, drawn along the platform by hand and not served by the icing truck.

By use of this high-lift, electric icing truck the force icing cars has been reduced and more time is available for the remaining men to clean or otherwise service the lay-over equipment in the yards.

EXTRAORDINARILY HEAVY TRAFFIC on the lines of the Swiss Federal railroads has made it necessary to use a number of hitherto-idle steam locomotives on electrified lines, due to shortages of electric locomotives. Also, trains which hitherto had been limited in length in order to insure fast running have had cars added to the physical limit of the locomotive.

NEWS

Price-Fixers Eye Transportation

One more government agency on job to tell managers how to run their business

In a number of rate discussions recently, Dr. G. Lloyd Wilson—the well-known authority on traffic at the University of Pennsylvania (and now the head of the transportation branch of the government's price-fixing bureau)—has put in an appearance, trying to push down the rates on defense traffic. Since the government already has the whip-hand on prices of transportation, lodged in the I. C. C., there has been some speculation as to just what useful function the burgeoning price-control bureau could serve by adding its talents to the many already on the job of supervising the functioning of transportation.

Dr. Wilson, in a recent address at Tulsa, clarified somewhat the functions his section of the price-control bureau (still known, as we go to press, as O.P.A.) is supposed to serve. Of these duties, Dr. Wilson said:

"The Division of Transportation of O.P.A.C.S.—now O.P.A.—was organized: (1) to keep that organization informed with respect to changes in freight rates; (2) to advise with respect to transportation rate and service problems; (3) to represent the organization in cases before the Interstate Commerce Commission, the United States Maritime Commission, and other regulatory agencies; (4) to analyze the effects of costs upon rates and rates upon prices of commodities; (5) to assist in obtaining adequate supply of transportation facilities at reasonable rates; (6) to assist in obtaining reductions in rates where substitutions had to be made of one form of transportation for another, when satisfactory rates are not available in the substituted forms of transportation; (7) to prevent unwarranted increases in rates which would be inimical to the control of the prices of commodities; and, (8) to represent O.P.A.C.S.—now O.P.A.—in governmental organizations dealing with transportation facilities, services and charges.

"In dealing with transportation problems, a number of interdepartmental and inter agency organizations have been set up. A few are typical. A Central Motor Transportation Committee consisting of representatives of government departments and motor transportation organizations and with district committees in each District in which the Bureau of Motor Carriers of the Interstate Commerce Commission has District Offices working to obtain a complete inventory of motor transport facilities and to develop and execute plans for efficient motor transportation services.

An Intercoastal Shipping Priorities Advisory Committee serves to advise the United States Maritime Commission, whose Division of Emergency Shipping has responsibility of allocating the scanty shipping space available for the transportation of freight in the intercoastal trade between the Atlantic and Gulf of Mexico and Pacific seaboards. So many vessels formerly engaged in the intercoastal trade have been diverted to other trades to transport the strategic and critical commodities needed to be brought from other parts of the world, that only a small fraction of the shipping space needed is now available.

"A similar inter-departmental committee advises with respect to the use of vessels engaged in serving strategic and critical goods into the country. Cooperation between carriers, shippers and the government has gone far to aid in national defense and civilian supply. Further cooperation will be necessary in the hard days ahead,—but I am confident that this cooperation will be forthcoming in increasing measure."

In his speech, Dr. Wilson went on to enumerate a number of recommendations for the more efficient use of the nation's transportation plant. Among them was the suggestion that "consideration should be given to the pooling of transportation facilities wherever needed to improve service or increase efficiency." He also advocated the "co-ordination" of the various agencies of transportation and the use of each "in the services in which it is relatively most efficient, under through arrangements for service at reasonable and compensating rates."

The address was concluded with an optimistic statement as to the professional opportunities now being afforded to transportation people. He also warned that "increases in transportation rates may lead or be used as excuses for increases in prices, which, in turn, can lead to increased costs of transportation and to further price increases, ad infinitum."

Brown Named Eastern Public Relations Head

R. W. Brown, president of the Lehigh Valley, was named chairman of the Committee on Public Relations of the Eastern Railroad Presidents Conference at a meeting of the group in New York on September 18. Mr. Brown succeeds A. N. Williams, now president of the Western Union Telegraph Company, whom he succeeded as Lehigh Valley head.

Reorganization Plan for C. & S.

Proposes maturities extension, lower interest, to avoid possible bankruptcy

The management of the Colorado & Southern has issued a plan for the reduction of bond interests and extension of maturities which would reduce fixed bond interest from $1,997,728 per annum to $986,080 and extend the maturity of certain underlying bonds. Pointing out that, to be effective, the plan must have the approval of holders of 85 per cent in principal amount of its general mortgage bonds outstanding in the hands of the public, the road urges bondholders to indicate acceptance of the plan by submitting assent thereto. The road's solicitation hints strongly that the alternative to success of the plan would be bankruptcy proceedings, which it describes as "long and expensive, with resulting suspension or reduction of interest payments for an indefinite period and related confusion and decline in market value of bonds, as well as resulting impairment or elimination of the stocks of the company."

That the financial situation of the road is precarious is strongly emphasized. It is pointed out that for the last three years it has shown substantial deficits after bond interest; that the cash reserves of the company have been so depleted that at times during 1940 and 1941 it was obliged to withhold payment of current bills. Funds to meet recent interest payments have been obtained by postponing payment of bills and through temporary loans of various amounts from a subsidiary railroad. In addition the road faces the problem of meeting the maturity of $27,443,200 refunding and extension mortgage bonds on May 1, 1945; a note for $445,982 on March 1, 1944 and an agreement to repurchase $546,000 of first mortgage bonds of the Galveston Terminal railway on March 1, 1944.

The main provisions of the management's plan are as follows:

(1) Reconstruction Finance Corporation would be asked to accept fixed interest at the rate of 2½ per cent and contingent interest at the rate of 1½ per cent on $27,443,200 refunding and extension mortgage bonds due May 1, 1945, bearing 4½ per cent interest but on which interest has been paid and accepted at the rate of 4 per cent.

(2) Holders of the $20,000,000 general

(*Continued on page 504*)

British RRs Not Socialized Yet

Working under govt. guarantee but no move yet made to nationalize them

The recent move by the British government increasing the guaranteed net revenue of the four British main-line railways and the London Passenger Transport Board from about $173,000,000 to $186,000,000 (which was reported in the *Railway Age* of September 13, page 425) apparently effected also a fundamental change in the financial relationship between the government and the carriers. Press dispatches reaching this country at the time of the government order did not allude to this latter phase of the government's action, but Contango's weekly economic letter from Great Britain, dated September 18, states that the increase in guaranteed revenues is only a part of a fundamental change in the status of the railroads.

Most important change, according to the letter, is that henceforth the former provision for adjusting fares and rates to fluctuating costs would be abolished, and that, to avoid inflation, the government will probably stabilize transportation charges. This means that the railroads will no longer be permitted to exercise a direct concern in the amount secured by way of revenues but must depend upon subsidies from the government to make up the guaranteed net revenue.

The other important change is that the railroads will now be required to bear 50 per cent of the amount of damage to their properties while the government will pay the remaining 50 per cent as a charge apart from the guaranteed net revenues. Heretofore there has been a top limit of $40,000,000 on the amount of war damage which could be charged to the railroads in any one year. Also they have had to pay for air-raid precaution work financed by the government only when their revenues exceeded the guaranteed minimum of $160,000,000.

According to the letter, the London stock exchange believes the government struck a hard bargain with the railroads. "From the viewpoint of the community, a hard bargain for the marginal stockholders is a good bargain for the state in terms of individual taxpayers who must, in the end, foot the bills. But since one of the main reasons for the new agreement is the Chancellor of the Exchequer's policy of price stabilization by keeping transport costs from rising unduly, the taxpayer may yet have to carry a heavy burden in railroad subsidies."

It is difficult to understand what the Contango letter means in its statements that the "British government will hire the railroads for the duration of the war and one year after," or that "the government has taken over the roads." Under the railway control order of 1939, the British Ministry of Transport (since May, 1941, merged with the shipping ministry to form the Ministry of Wartime Communications) assumed a direct control of the railroads on September 1, just three days before Great Britain declared war on Germany. As a practical matter the railroads are being operated by an executive committee made up of the general managers of the various roads, which committee acts as an agent for the Ministry. There is no intimation in the Contango letter that this relationship has been changed fundamentally.

Hence, until more detailed information on the new government order is available here, it must be assumed that the letter refers to the abolition of the railroads' right to adjust rates and fares to meet variations in prices and conditions as constituting assumption of control by the government. Further evidence for this broad interpretation of the letter is Contango's own statement that "labor circles have expressed disappointment that the government has not taken this opportunity to nationalize the railroads." At face value, this means that the railroads have not been taken over by the government or any radical change made in the relationship between the Communications Ministry and the present managements of the roads.

Status of R. F. C. Rail Loans

The monthly financial statement of the Reconstruction Finance Corporation as of August 31, shows disbursements to railroads (including receivers) of $810,325,175 and repayments of $349,248,921.

Major Frost to Address Railway Magazine Editors

Major Frost, public relations officer for the War Department in seven southern states, will be the principal speaker at the annual banquet of the meeting of the American Railway Magazine Editors Association to be held at New Orleans, La., on November 14 and 15.

Tax Bill Signed

President Roosevelt has signed the new tax act on which Congressional action was completed last week, as noted in the *Railway Age* of September 20, page 462. Representatives of the railroads conferred in Washington, D. C., this week with representatives of the Treasury Department on procedures for collecting the five per cent tax on passenger transportation which the act levies.

Would Improve N. Y. Canal with Federal Funds

Representative Beiter, Democrat of New York, has introduced H. R. 5639 to authorize the federal government to contribute funds in connection with the improvement of that section of the New York State Barge Canal between Three Rivers Point and the Niagara river. The bill would provide $50,000,000 for the improvements to include deepening and widening of the canal and raising the level of bridges to provide a vertical clearance of 20 ft.

The section of the canal thus improved, the bill stipulates, "shall remain forever free from tolls for the use thereof and the improvements constructed under this act shall thereafter be maintained by the state of New York."

Raps Low Figure for Ditch Cost

Missourian cites record showing such projects always top estimated outlay

Debate on the proposed St. Lawrence seaway and power project broke out in the House of Representatives on September 23 when Representative Ploeser, Republican of Missouri, made a brief speech entitled "Pork-Barrel Orgy." Citing the rivers and harbors bill now being framed as evidence of an intention "on the part of the spenders to outdo their past notorious performances," Mr. Ploeser proceeded to assail the $191,681,515 estimated cost of the St. Lawrence which is given in a House rivers and harbors committee list of projects already approved for inclusion in that omnibus measure.

Because he believes that the stated estimated costs of other approved projects are also too low, the Missourian called the committee's list "an apparent effort to counteract a prevailing belief in the public mind that this bill will be heavily loaded with 'pork.'" Dealing specifically with the St. Lawrence estimate, Mr. Ploeser went on to contrast it with St. Lawrence estimates made "by a number of the most distinguished engineers in the United States;" and included in testimony given in 1932 before a subcommittee of the Senate committee on foreign relations by former Congressman Peter G. Ten Eyck of New York. The estimators included former President Herbert Hoover whose estimate was $800,000,000; Dr. Harold G. Moulton ($712,000,000); Col. Hugh L. Cooper ($1,350,000,000); E. P. Goodrich ($1,054,000,000).

Representative Voorhis, Democrat of California, spoke up to say that many projects in the rivers and harbors bill "have been taken up not with a view to this year, next year, or even the year after, but with a view toward an examination of various projects looking ahead into an indefinite future to the possibility that the time may come when this country will once again face a serious unemployment problem." Mr. Ploeser came back with another attack on estimates made by War Department engineers, citing the example of Camp Leonard Wood in Missouri which he said was estimated by War Department engineers to cost $15,000,000, and actually cost $33,000,000.

Representative Pittenger, Republican of Minnesota, after referring to "railroad propaganda in the newspapers about the St. Lawrence being a $1,000,000,000 project," proceeded to defend the Army engineers. He said: "We have never found them wrong, and they are not wrong so far as the St. Lawrence is concerned. The figure is $285,000,000 as our share, less $93,000,000 we will get from the power which the state of New York will take."

In the latter connection Tom J. McGrath, executive director of the National St. Lawrence Project Conference, has written to Chairman Mansfield of the

House committee on rivers and harbors, objecting to the aforementioned committee list's method of setting up the St. Lawrence as a $191,681,515 project with only a footnote reference to the other $93,000,000. Mr. McGrath stated that the $93,000,000 would have to be paid by the federal government, and the reimbursement would come over a period of 50 years out of funds collected by the Power Authority of the State of New York from users of power. Mr. McGrath also asserted that even the $285,000,000 figure was too low in that it did not include such items as interest on bonds during construction or amortization charges.

Bearing also on Army-engineer investigations of waterway projects is the pamphlet "Savings in Transportation Charges by Water on Rivers and Canals Constituting the Inland Waterways System," which was prepared recently by C. S. Duncan, economist of the Association of American Railroads. Among other observations, Dr. Duncan points out that "the savings claimed for waterway transportation, whether direct or indirect, are essentially only a shifting of the cost of such transportation to others than those who pay the rates or charges for the actual carriage of goods—to the general taxpayers in the case of direct savings and to competing agencies in the case of indirect savings."

The Army engineers' method of determining the "savings" in connection with a proposed project, Dr. Duncan also said, does not determine the "economic justification" of such a project. "Economic justification," he added, "must rest upon the basic principle that the one who pays is the one who receives and the one who receives is the one who pays; by no method of economic justification can individual advantage be balanced against general costs to determine economic justification. Expenditures of government funds to subsidize waterways for the advantage of individuals can be supported only by the principles of state socialism and, to be justified at all, state socialism must occupy the whole field . . . The basic principle relating to waterway projects is that if any waterway is a necessary, a reasonable and an economic development, and if the operations thereon are self-supporting, i.e., pay their way, and are appropriately regulated, competing agencies have no valid basis for objection even though their special interests are adversely affected."

Joint Forwarder-Truck Arrangements Get Another Reprieve

The Interstate Commerce Commission has further postponed from October 1 until January 15, 1942, the effective date of its outstanding orders which require the discontinuance of joint-rate arrangements between forwarders and motor carriers.

G. M. & O. Subsidiaries to Merge

The Gulf Transport Company, a motor carrier subsidiary of the Gulf, Mobile & Ohio, has asked the Interstate Commerce Commission for authority to acquire the motor carrier operating rights of the Gulf, Mobile & Ohio, the Mobile & Ohio Transportation Company, and the Mobile & Ohio Transportation Company of Illinois.

Transport Branch of "Y" Issues Citizen-Training Manual

"A Citizenship Training Manual" has been prepared by the Commission on Responsible Citizenship of the Transportation Department of the Y. M. C. A. for use in educational work on this subject among members of the transportation branch of the Y.

A 32-page pamphlet 6 in. by 9 in., the manual advises each Y to appoint a "citizenship committee" and then proceeds to outline some of the activities which such a committee might undertake—and how to do it. Study and discussion groups, lectures and debates, classes for aliens seeking citizenship—are among the projects concerning which helpful suggestions are given.

Opportunities for injecting citizenship questions into holiday celebrations and programs (especially those of Y groups) on other subjects are outlined — and a bibliography of practical books and periodicals is offered.

New Cars for the "Pacemaker"

New streamlined "luxury" coaches will replace those now in service on the "Pacemaker," all-coach train of the New York Central between New York and Chicago which started operation on July 28, 1939. The new coaches, which have just been delivered, are built of high-tensile, low-alloy steel and are fully streamlined, with side skirting and folding steps. Each is equipped with 28 rotating and reclining seats with foam rubber cushions, providing seating capacity for 56 persons per car. Other features include improved and enlarged lounge rooms at each end.

Diesel Power Units Supplant Steam on Two "Hiawathas"

On September 20 the first of two new 4000-hp. Diesel-electric locomotives was placed in service on one of the regular runs of the "Hiawathas," streamlined trains of the Chicago, Milwaukee, St. Paul & Pacific operating between Chicago and Minneapolis, Minn. The other new Diesel-electric unit will be placed in service about a week or 10 days later. When it is placed in service, two of the four regular Hiawatha trains will be Diesel-powered and the remaining two will continue to be operated, as formerly, by streamlined steam locomotives.

Club Meetings

The Long Island Traffic Club will hold its annual outing at Bethpage State Park, Farmingdale, N. Y., on October 11. The committee in charge of arrangements is headed by Don Mead, Chicago & North Western, 500 Fifth avenue, New York.

The Car Foremen's Association of Omaha, Council Bluffs and South Omaha Interchange will hold its next meeting on October 9 at 1:30 p. m. at the Union Pacific offices at Council Bluffs, Iowa.

The Indianapolis Car Inspection Association will hold its next meeting on October 6 at 7 p. m. at the Indianapolis (Ind.) Union station.

The Car Foremen's Association of Chicago will hold its annual meeting on October 10 at 8 p. m. at the La Salle hotel, Chicago. The program will include election and installation of new officers, entertainment and dancing.

Representation of Employees

Following a recent election on the Central of Georgia, the National Mediation Board has certified that the Brotherhood of Railway Clerks, already representing clerical forces on that road, has also been duly designated to represent laborers and related employees in and around stations, storehouses and warehouses. The board rejected a contention of the Central of Georgia that the ballot used in such elections should be changed to provide a place where an employee might vote for "no representative."

"This objection," the Board said, "was not sustained inasmuch as the Railway Labor Act specifically provides that 'representatives for the purposes of the Act shall be designated by the respective parties'; that is to say, the law does not contemplate nor does it appear that any such law as the Railway Labor Act could contemplate that its purposes be achieved through no representatives."

Kendall Wants New Cars to Remain Uncontaminated

Citing the "considerable increase lately in the number of reports received covering cars loaded with contaminating commodities," W. C. Kendall, chairman of the Car Service Division, has issued a circular to stress the necessity for maintaining new box and automobile cars in condition for handling high-class commodities. Asserting that every high-class car used for contaminating commodities "offsets one of the new cars being received and decreases by one unit the equipment available to handle high-class commodities during the coming peak months," Mr. Kendall also called attention to the violations of Transportation Division Circular T-56 which are involved.

In the latter connection the Car Service Division chairman went on to suggest that the provisions of that circular "be rebroadcast in such manner as to reach everyone responsible for placement of empty equipment at industries, emphasizing the necessity for strict compliance in every instance."

Red Cap Hearing to Resume in Chicago

Thomas Holland, director of the research and statistics branch of the Wage and Hour Division, will preside at a hearing on the 10-cents-a-bag system for red caps to be held in Chicago, October 7, according to an announcement this week by Baird Snyder, acting Administrator of the Division.

The hearing, which will begin at 10 a. m. in Room 325 of the New Post Office Building, Canal and Van Buren streets, is

a continuation of a session in Chicago on July 15. It will probably cover all railroad terminals in Chicago, all of the railroad terminals of the Illinois Central, and the terminals in Minneapolis, Minn.; Milwaukee, Wisc., and Madison; Omaha, Nebr.; Cincinnati, Ohio, and Columbus; Indianapolis, Ind.; Louisville, Ky.; and the Pere Marquette station in Detroit, Mich., it was pointed out.

Hearings have already been held in New York and St. Louis, Mo., and dates for hearings in Dallas, Tex., and Washington, D. C., will be announced later.

Lehigh Valley Staff Presents Nine Ambulances to the British

A fleet of nine ambulances presented by employees and officers of the Lehigh Valley to the British were christened the "Lehigh Valley Mercy Unit" in a short ceremony before the general offices of the road in New York on September 22. The christening was performed by the ten-months-old namesake grandson of Revelle W. Brown, president of the road, who poured milk from his morning bottle over one of the group.

Shortly thereafter, driven by women volunteer drivers of the American Red Cross Motor Corps, the $16,000 caravan crossed the river to begin a six-day tour of the Lehigh Valley system, visiting shops, freight houses, enginehouses, etc., to show Lehigh Valley employees what their voluntary contributions have made possible. The tour is scheduled to end on September 27 with a large dance in Dansville, N. Y., for the benefit of the British-American Ambulance Corps. Ultimate destination of the ambulances is with the British Imperial Forces of the Nile.

Also included in the total contributions of $94,150 received to date from American railroad employees and officers for ambulances for the British is $2,000 received by the British-American Ambulance Corps on September 23 for the purchase of one so-called "equatorial type" ambulance from Albert Phillips, general secretary-treasurer of the Brotherhood of Locomotive Firemen & Enginemen, Cleveland, Ohio. This amount was subscribed by $2 contributions made by each delegate to the recent convention of the brotherhood in Denver, Colo.

C. N. R.'s St. Clair River Tunnel 50 Years Old on September 19

The Canadian National-Grand Trunk tunnel under the St. Clair river between Port Huron, Mich., and Sarnia, Ont., was 50 years old on September 19. The tunnel, with approaches, measures 11,725 ft., the actual underwater portion being 6,000 ft. in length. Preliminary work began New Year's, 1889, and forces operating from each side met on August 30, 1890, railway service beginning actually a year later, September 19, 1941.

The tunnel was bored through yellow sand, quicksand and blue clay, the operations being carried out by excavating shields designed by Alfred E. Beach, New York engineer. Daily surveys kept the shields in line, the variation never exceeding a quarter inch, and eventually the working forces met exactly as planned. Soil excavated amounted to over 2,000,000 cu. ft., and the tunnel walls of cast iron segments weigh 54,000,000 lbs. First operated by specially designed steam locomotives which burned hard coal, the tunnel is now served by electric locomotives.

Atlantic Shippers to Meet October 7 and 8

The Atlantic States Shippers Advisory Board will hold its 56th regular meeting at the Onondaga hotel, Syracuse, N. Y., on October 7 and 8. The program of the first day includes preliminary committee meetings and a special meeting of the freight loss and damage prevention committee at 8 p. m. The latter is open to all shippers and receivers of freight and is designed to be especially helpful to traffic and shipping clerks, packers, drivers, purchasing agents and platform employees.

On October 8, besides regular committee reports, there will be presented preliminary reports from 30 special local car efficiency committees which will present detailed information on car supply problems. Revelle W. Brown, president of the Lehigh Valley, will address the luncheon session at 12:30 p. m. Preliminary forecast by the commodity committees of the board indicate an increase in carloadings during the fourth quarter of 10.2 per cent, as compared with actual loadings for the same period last year.

These Nine Ambulances for Use by the British Imperial Forces of the Nile Are the Gift of the Employees and Officers of the Lehigh Valley, Who Contributed $16,000 for Their Purchase. The Vehicles Are Here Shown Following a Christening Ceremony Before the Road's General Headquarters at New York

Budd Names Committee to Work With SPAB and OPM

Ralph Budd, defense transportation commissioner, on September 18, announced the appointment of two committees to represent his office in working with the Supply Priorities and Allocations Board and the Office of Production Management on matters relating to the supply of materials required for construction of railroad freight cars and steam locomotives. The membership of the committees is:

Committee for the Carbuilding Industry

C. A. Liddle, president, Pullman-Standard Car Manufacturing Co., Chicago.
C. J. Hardy, president, American Car & Foundry Company, New York.
Lester N. Selig, president, General American Transportation Corp., Chicago.
Edwin Hodge, Jr., president, Greenville Steel Car Company, Greenville, Pa.
A. Van Hassel, president, Magor Car Corporation, Passaic, N. J.
F. A. Livingston, president, Ralston Steel Car Company, East Columbus, Ohio.
J. F. MacEnulty, president, Pressed Steel Car Company, Pittsburgh, Pa.

Committee for the Steam Locomotive Industry

W. K. Farrell, general purchasing agent, American Locomotive Company, New York.
W. H. Harman, vice-president, Baldwin Locomotive Works, Philadelphia, Pa.
L. A. Larsen, vice-president, Lima Locomotive Works, Inc., Lima, Ohio.
G. W. Alcock, secretary, Locomotive Institute, New York.

Earnings in Canada

In July the Canadian National earned $4,916,312 of net operating revenues—highest for that month in the history of the system. Operating revenues totaled $25,655,442 and expenses $20,739,130—representing increases over last year, respectively, of $3,260,410 and $2,516,684. The operating net was $743,726 higher than last year.

In August the C. N. R. earned $5,171,732 of net operating revenues (up $1,503,551), with gross at $25,808,928 (a rise of $4,588,740) and expenses at $20,637,196 (up $3,085,189). For the eight months, gross was $193,179,858 (up $35,883,087); expenses were $150,983,604 (increase $17,727,682); and operating net was $42,196,254 (up $18,155,405).

The Canadian Pacific in July had net operating revenues of $3,195,419 (an increase of $790,588)—derived from gross of $19,359,454 (up $4,056,037) and expenses of $16,164,034 (a rise of $3,265,448). For the seven months the C. P. R. had gross

revenues totaling $119,199,840 (up $28,511,751), expenses of $96,084,726 (a rise of $20,437,474), and an operating net totaling $23,115,113 (an increase of $8,074,276).

Freight Car Loading

Loadings of revenue freight for the week ended September 20 totaled 907,969 cars, the Association of American Railroads announced on September 25. This was a decrease of 5,983 cars, or 0.7 per cent, below the preceding week, but an increase of 94,640 cars, or 11.6 per cent, above the corresponding week last year and an increase of 98,217 cars, or 12.1 per cent, above the comparable 1939 week.

As reported in last week's issue, loadings of revenue freight for the week ended September 13, totaled 913,952 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

For Week Ended Saturday, September 13 Districts	1941	1940	1939
Eastern	185,004	163,059	166,516
Allegheny	201,891	170,716	154,637
Pocahontas	60,722	51,627	55,278
Southern	124,848	107,583	114,088
Northwestern	147,647	141,572	125,571
Central Western	133,209	116,577	125,257
Southwestern	60,631	53,131	59,084
Total Western Districts	341,487	311,280	309,912
Total All Roads	913,952	804,265	800,431
Commodities			
Grain and grain products	45,045	42,494	50,112
Live stock	14,453	17,379	19,384
Coal	171,730	140,121	149,682
Coke	12,968	11,148	8,754
Forest products	45,655	40,438	35,137
Ore	74,448	73,702	56,454
Merchandise l.c.l.	158,787	156,442	162,856
Miscellaneous	390,866	322,541	318,052
September 13	913,952	804,265	800,431
September 6	797,740	695,094	662,357
August 30	912,720	768,775	716,397
August 23	899,750	761,108	683,906
August 16	890,374	743,050	669,793
Cumulative Total, 37 Weeks	29,436,005	24,954,277	22,646,496

In Canada.—Carloadings for the week ended September 13 were 70,421, as compared with 61,544 in the previous week and 61,779 in the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
Sept. 13, 1941	70,421	30,757
Sept. 6, 1941	61,544	27,577
Aug. 30, 1941	67,162	29,883
Sept. 14, 1940	61,779	25,941
Cumulative Totals for Canada:		
Sept. 13, 1941	2,196,568	1,083,233
Sept. 14, 1940	1,920,581	898,730
Sept. 16, 1939	1,689,939	749,060

Restriction on T. & P. Truck Service Modified

In order to permit the movement by motor vehicle of cotton from ginning or origin points to nearby compress or concentration points and "thus release a substantial number of freight cars which are needed for other purposes due to the heavy movement of defense materials," the Interstate Commerce Commission, Division 5, has granted a petition of the Texas & Pacific Motor Transport Company, affiliate of the Texas & Pacific, for modification of that most restrictive of the conditions which the commission imposes to insure that highway operations of railroads or their affiliates shall remain auxiliary to or supplemental of rail service.

The condition is No. 3 which stipulates that shipments transported by the Transport Company "shall be limited to those which it receives from or delivers to the railway [the T. & P.] under a through bill of lading covering, in addition to movement by applicant, a prior or subsequent movement by rail." The commission modified the condition by adding at the end the following: "and those which it transports as parts of through shipments prior or subsequent to movement by rail under appropriate transit rules." The petition for modification pointed out that "Tariffs and transit rules permit the application of a through rate from the ginning or origin point to ultimate destination although the cotton is ordinarily shipped out of the compress point on a bill of lading separate and distinct from the inbound movement from the ginning point."

Chairman Eastman, concurring, approved the report "because it will accomplish the results desired." He added: "However, I do not, for reasons which I have elsewhere stated, believe that condition No. 3, even when amended, will be a proper basis."

Non-Railroad Employment of Part-Time Railroaders

A series of tables designed to show the amount of wages creditable under Title II of the Social Security Act earned by employees who were covered by the Railroad Retirement Act has been made public by the Railroad Retirement Board. The tabulation, which includes the period from 1937 to 1939, is a joint project of the Railroad Retirement Board and the Bureau of Old-Age and Survivors Insurance of the Social Security Board.

An explanatory note reveals that for a number of technical reasons it was thought best to exclude from the tabulation the following groups of employees who may or may not have had earnings creditable under the Social Security Act: (a) Employees whose age was not reported to the Railroad Retirement Board; (b) employees 65 years of age or over in 1939; (c) employees who were known to have died or retired on an employee annuity under the Railroad Retirement Act by the end of 1939; and (d) employees who in the period 1937-1939 earned altogether less than $10 in wages creditable under the Social Security Act.

Table 1-A of the tabulation is divided into four parts and shows the Class I railroad employees in 1939 who earned wages creditable under Old Age Titles of the Social Security Act in the period 1937-1939: number average railroad wages and service months and average non-railroad wages for the period. The first part applies to all the 1,310,780 persons who worked in 1939 for class I railroads (excluding persons age 65 or over or age unknown and persons known to have died or retired). The second part deals with 1,024,847 employees, over 78 per cent of the entire group, who worked in coverage subject to the Retirement Act in all three of the years-1937, 1938, and 1939; the third part covers 108,028 employees who worked in such coverage in either 1937 or 1938 as well as in 1939; while the fourth part refers to 177,905 persons employed in 1939 only.

The report shows that the average railroad compensation for all the 1,310,780 employees for the three years was $3,780, and their average months of railroad service was 26.9. Average non-railroad wages amounted to $169, or four per cent of the railroad wages. All the non-railroad wages, however, it was pointed out, were earned by 319,375 persons, 24 per cent of the total. The average railroad earnings for three years for these 319,375 employees were $1,210, while their average non-railroad earnings were $691, or 57 per cent of the income from railroad work. This group, the tabulation shows, had on the average 13.3 months of railroad service during the period.

The proportion of railroad employees with non-railroad employment was lowest (13 per cent) for employees with railroad service in all the three years 1937, 1938, and 1939, according to the tabulation. On the other hand, 68 per cent of the employees in railroad service in 1939 but not in the two preceding years had employment in industries covered by Title II of the Social Security Act at some time during the period 1937-1939, and 60 per cent of the employees in railroad service in 1939 and in one of the two preceding years had such social security employment.

"The above figures", concludes the explanatory statement to the table, "suggest that non-railroad employment may be quite important for a relatively small proportion of railroad employees and of no great consequence for the large majority."

Amendments to Iron and Steel Scrap Schedule

Amendments "to bring about a parity among consumers who purchase iron and steel scrap in the Cincinnati (Ohio) market and to create an incentive for the sale of scrap rail and re-rolling rail by mines and logging roads" have been made to the Iron and Steel Scrap Schedule by the Office of Price Administration.

The first change provides a shipping point price within the Cincinnati basing point of 80 cents a ton below the basing point price for all grades of scrap excepting six casting grades. This revision, the OPA announcement said, "was made because of the great variation in switching charges within the Cincinnati basing point." Meanwhile, it does not detract from the advantages obtained by local steel mills from the previous amendment establishing Cincinnati as a basing point, but does remove certain inequalities that resulted to those consumers with plants outside the basing point who have historically purchased scrap in the Cincinnati market."

The other revision provides "an attractive price" at which mines and logging camps can sell scrap and rails for re-rolling. It is stipulated that the maximum shipping point prices for this type of scrap shall be the ceiling prices set in the schedule, (which apply specifically to scrap of railroad origin), "except that the maximum

shipping point price need in no case be less than $13.50 per gross ton for scrap rail and $15 per gross ton for rails for re-rolling." In addition, the formalities generally required from railroads upon the sale of scrap rail or re-rolling are eliminated when the seller is a mine or logging road.

Roebling's 100th Anniversary

On September 19, 1941, the John A. Roebling's Sons Company, Trenton, N. J., celebrated its 100th anniversary. Editors and publishers of industrial journals were invited to Trenton for the occasion. Following a luncheon at the plant, the visitors were conducted through both the Roebling, N. J., and Trenton plants and research laboratories, where the company is now actively engaged in production for national defense.

A feature of the event was a tensile test on a 4-in. cable. Special indicators were applied to the testing machine, which showed the observers the strain applied and the resultant stretch of the cable. Its ultimate strength was 1,400,000 lb.

In the evening the visitors were the guests of the company at the Nassau Tavern, Princeton, N. J., where Leon Henderson, federal price administrator and native of southern New Jersey, was the guest speaker. He said that the American people must make sacrifices and "pull in our belts" in the "all-out production effort." Civilian effort should be maintained by reserving some supplies of scarce materials, however small, for civilian purposes. He warned also that "hoarding of scarce materials by industries and governmental agencies alike must end." Mr. Henderson commended the policies and spirit under which the Roebling organization had been founded and developed, and stressed the fact that when the national emergency is over we must return to private enterprise which is fundamental to the preservation of our democracy. He declared that the Roebling Company "is a symbol of those principles which have made it possible for free men to establish free enterprises and prosper in a free country," and added, "today we are engaged in a great cooperative effort to maintain those principles here and across the seas. We are striving to insure the continuation of the conditions which made possible the growth of this great company."

Three speakers representing the Roebling Company also made brief addresses. These were: William A. Anderson, president, Charles G. Williams, executive vice president, and John A. Roebling, son of the late Colonel Washington A. Roebling, and grandson of the founder. Robert T. Bowman, public relations director for the company, was toastmaster.

Leon Henderson, Speaking at the John A. Roebling's Sons Company 100th Anniversary Banquet, Facing William A. Anderson, President of the Roebling Company

Would Require Rails to Co-ordinate With Independent Truckers

Dissenting from his Joint Board No. 110 colleagues' favorable report on an application of the Illinois Central, George C. Anderson, Tennessee member of the board, has called upon the Interstate Commerce Commission to reverse its precedent-setting Louisville & Nashville decision and thus leave railroads to arrange co-ordinated freight service through tie-ups with their highway competitors. In the L. & N. case (No. MC-89811), as noted in the *Railway Age* of March 1, page 393, the commission rejected American Trucking Association contentions along the foregoing lines and permitted the L. & N. to install its own highway operations.

In the present case Joint Board No. 110's majority, consisting of C. H. Ohme of Alabama and Dillard W. Brown of Mississippi, has recommended that the commission grant the Illinois Central certificates authorizing common-carrier trucking operations on routes between Memphis, Tenn., and Jackson, Miss., between Jackson, Tenn., and Grenada, Miss., between Aberdeen Miss., and Durant and between Corinth, Miss., and Haleyville, Ala. In connection with the favorable action which it recommends the joint board majority would have the commission impose the usual conditions designed to insure that the highway operations shall be auxiliary to or supplemental of I. C. rail service. The case is docketed as No. MC-86779 (Sub-No. 2).

Dissenter Anderson conceded that the L. & N. precedent applies; but feeling so strongly that the commission there erred, that he thinks he would be derelict in his duty if he did not recommend that the L. & N. finding "be specifically overruled in the instant proceeding." Mr. Anderson goes on to argue at some length in support of his view that railroad applications should be denied in situations where it would be possible to set up co-ordinated operations with independent truckers. He believes that the rule of the L. & N. case is "contrary to the national transportation policy." He does not maintain that the public "is not entitled to all improvements which can be made in the present transportation service as a whole"; but he does believe "that such improvements should be made by the existing carriers whenever possible and in accordance with existing law." "The commission," he added, "has found on numerous occasions that it has no power to compel the co-ordination of rail-carrier and motor-carrier services. If such co-ordinate service is a necessity it should be brought into existence in the usual manner even though it requires an amendment to the act, and not through the back door."

Mr. Anderson also sat as a member of Joint Board No. 229 which has recommended denial of a Yazoo & Mississippi Valley application for a certificate covering common-carrier trucking operations between Memphis, Tenn., and Helena, Ark. The proposed report stated that the applicant had not made the required showing of public convenience and necessity; and Mr. Anderson noted his concurrence, but for the reasons stated in his abovementioned dissent in the I. C. case.

Reorganization Plan for C. & S.

(*Continued from page 499*)

mortgage 4½ per cent Series "A" gold bonds due May 1, 1980, outstanding in the hands of the public, would be asked to reduce the interest to the rate of 4 per cent and to accept fixed interest at the rate of 1½ per cent, and contingent interest at the rate of 2½ per cent. The R. F. C. would be asked to reduce the interest on the $4,918,000 additional 4½s which the road has pledged with it as collateral, to the rate of 4 per cent, of which 1½ per cent would be fixed interest and 2½ per cent contingent interest.

(3) Following the payment of fixed charges and contingent interest on the refunding and extension mortgage bonds (up to 1½ per cent) the road would pay from income remaining an amount not exceeding $300,000 for additions and betterments to the property during the year. Any income remaining after such appropriations would be applied first to payment of contingent interest up to 2½ per cent on the general mortgage bonds, and, second, to retire refunding and extension bonds and thereafter other funded debt.

(4) The R. C. F. would be asked to consent to extensions of the maturity dates of certain obligations held by it for periods of 10 years or other such periods approved and authorized by the I. C. C., but in no event beyond January 1, 1955. These securities comprise $27,443,200 principal amount of C. & S. refunding and extension mortgage bonds maturing May 1, 1945; C. & S. contracts of April 27, 1935, to repurchase the above bonds not later than

January 1, 1945; C. & S. note dated May 5, 1938, for $525,500, on which the balance of principal is $445,981 due March 1, 1944; $546,000 principal amount of first mortgage bonds of Galveston Terminal railway, maturity of which has been heretofore extended to March 1, 1948; C. & S. agreement of May 5, 1938, to repurchase these bonds not later than March 1, 1944; and of all contracts and other securities held by R. F. C. as collateral securities in connection with these obligations.

(5) Board of directors of the road would continue to have 13 members, but two of these would be specifically designated by the R. F. C. and two by the trustee under the general mortgage.

(6) The plan would not affect equipment trust notes or first mortgage bonds of the subsidiary Fort Worth & Denver City pledged with the R. F. C. Neither would the plan affect any of the classes of capital stock of the road, but, since it would allocate for capital improvements and bond retirement earnings otherwise available for dividends, it would thereby restrict the payment of the latter.

The management of the road is advised that the R. F. C. is willing to accept the plan subject to necessary approval of the I. C. C. and acceptance by the holders of 85 per cent of the general mortgage bonds. The road states that while it is impossible to forecast results under the plan "from all information available there is reason to believe, that, if adopted the plan would place Colorado & Southern in a position to pay the fixed bond interest, $986,080 a year with reasonable certainty, and, in some years, at least, to pay part or all of the contingent interest."

Track Supply Association Holds Large Exhibit

In conjunction with the meeting of the Roadmasters' Association, 56 manufacturers of materials and equipment used in the construction and maintenance of track, presented an exhibit of their products under the auspices of the Track Supply Association. The exhibit was held in the exhibit room in the Hotel Stevens immediately adjacent to the convention meeting room, where adequate space was available and convenient, and where the examination of the exhibit by those attending the convention was assured. Not only was the number of exhibitors greater than for any year since 1930, but the number of exhibit spaces used, 81, was also larger. This compares with 55 companies and 74 spaces a year ago.

The officers of the Track Supply Association who were responsible for the preparation and conduct of the exhibit were: president, E. C. Argust, vice-president and secretary, Morden Frog & Crossing Works, Chicago; first vice-president, R. M. Blackburn, Buda Company, Chicago; second vice-president, H. C. Hickey, The Rail Joint Company, Inc., Chicago; secretary-treasurer, Lewis Thomas, general sales manager, Q & C Company, Chicago; directors, R. J. McComb, vice-president, Woodings-Verona Tool Works, Chicago (ex-officio); J. J. Clutz, Pennsylvania, Indianapolis, Ind. (honorary); George W. Morrow, Reade Manufacturing Company, Chicago; F. H. Philbrick, Power Ballaster Corporation, Chicago; J. C. Rinehart, Eagle Grinding Wheel Company, Chicago; T. D. Crowley, Creepcheck Company, Chicago; H. W. Cutshall, Electric Tamper & Equipment Company, Chicago; and H. M. McFarlane, O. F. Jordan Company, East Chicago, Ind.

In the election of officers for the coming year, Mr. Blackburn was advanced to the presidency; Mr. Hickey was made first vice-president; H. M. McFarlane was elected second vice-president; and Mr. Thomas was re-elected secretary-treasurer. The new directors elected for two years were: C. B. Armstrong, Air Reduction Sales Company, Chicago; C. O. Jenista, Barco Manufacturing Company, Chicago; and J. B. Templeton, Templeton, Kenly & Co., Chicago. F. A. McGonigle, manager railway sales, Mall Tool Company, was elected to fill the unexpired term left vacant by Mr. McFarlane's advance.

A list of the exhibitors, the products shown and the names of their representatives follow:

Air Reduction Sales Company, New York—Welding and cutting equipment; oxygen and acetylene regulators; pipe welding; rail cropping; butt-welded rail; built-up rail joints; flame-cleaning torch—C. B. Armstrong, C. A. Daley, J. F. Franzen, J. W. Kenefic, L. C. McDowell, U. F. Portell, D. N. Newland, E. F. Turner.

American Fork & Hoe Company, Cleveland, Ohio—Rail anchors; tapered rail joint shims; shovels; weed cutters; ballast forks; rakes; scuffle hoes; broom rakes; axes; hammers; scythes—H. C. Branahl, C. C. Connolly, G. L. Dunn, S. L. Henderson, H. S. Johnson, J. J. Nolan, D. L. O'Brien, Frank J. Reagan, John Skeel, R. J. Whalen.

Armco Railroad Sales Company, Middletown, Ohio—Samples of pipe and interlocked and clip-type sheet piling; models of bin-type retaining wall, multi-plate pipe and portable airline; subdrainage photographs—R. Y. Barham, E. T. Cross, R. B. Faries.

Barco Manufacturing Company, Chicago—Gasoline tie tampers; gasoline hammer—F. N. Bard, W. J. Belhke, C. A. Cox, C. O. Jenista, W. T. Jones, L. J. Lytle, J. L. McLean, C. L. Mellor, F. B. Nugent.

Buda Company, Harvey, Ill.—Inspection motor car; 2-4 man inspection car; switch stand; bonding drill; track drill; track liner; rail bender; journal jacks; track jacks; hydraulic jacks; pole jacks; automatic towering jacks; tie puller; and tie nipper, tool grinders, bumping posts—R. M. Blackburn, H. H. Cohenour, J. S. Dempsey, W. Ebert, R. B. Fisher, F. L. Gormley, J. F. Hartley, W. H. Haas, R. K. Mangan, W. T. Mulcahy, L. Kerlin, D. Richards, M. S. Rotroff, J. W. Sanford, G. A. Secor, L. O. Stratton, E. H. Walker, R. P. Williamson.

Chicago Pneumatic Tool Company, New York—Pneumatic tamper; gasoline tamper; power-vane impact wrench; portable compressor; spike driver; pneumatic and electric grinders and nut runners—J. A. Congdon, Jr., C. L. Butler, H. R. Deubel, T. P. Harris, H. J. Maginnis, W. Pallowick, E. S. Rosselle.

Chipman Chemical Company, Inc., Bound Brook, N. J.—Weed killer—C. M. Burnuth, N. J. Leavitt, W. H. Moyer, I. J. Strain.

Conley Frog & Switch Company, Memphis, Tenn.—Expansion joints for fixed span, swing and bascule bridges; solid manganese spring frogs; turntable frogs; frogs for rail laying work and wrecking service—E. H. Baumgarten, J. E. Conley, L. J. White.

Creekcheck Company, Inc., Newark, N. J.—Rail anchors—T. D. Crowley, N. A. Howell, W. H. Remmel.

Crerar, Adams & Co., Chicago—Track and bonding drills; track tools; pipe wrenches; tool handles; tie and lumber crayons; other marking; air skilsaws and electric hand drills; track and switch brooms—R. W. Beasant, Geo. J. Doyle, A. Kopala, I. E. Poehler, J. M. Temple.

Cullen-Friestedt Company, Chicago—Moving pictures of Burro locomotive crane in operation; rail tongs—W. C. Bamber, K. J. Beller, L. B. Bertaux, C. J. Bronez, E. V. Cullen, F. J. Cullen, F. P. Cullen, T. G. Frazee, G. H. Goodell, Robert W. Jamison, F. L. Kendig, Jos. F. Leonard, James E. Simkins, Wm. J. Roehl.

A. P. deSanno & Son, Inc., Phoenixville, Pa.—Radiac grinding wheels—N. A. Conway, Jr., Wm. Lukey, L. G. Martin, E. J. Rohan.

Duff-Norton Manufacturing Company, Pittsburgh, Pa.—Track jacks; power jacks; journal jacks; automatic lowering jacks; tie spacers; tie remover—E. C. Gunther, J. F. Van Nort.

Eagle Grinding Wheel Company, Chicago—Grinding wheels—John Abram, L. E. Buckingham, C. L. Frame, J. C. Rinehart.

Elastic Rail Spike Corporation, New York—Elastic rail spikes—C. M. Bernuth, William A. Fisher, A. C. Jack, B. Kuckuck.

Electric Tamper & Equipment Company, Ludington, Mich.—Electric tie tampers; 4, 8-tool power units; tamping tools; and assorted blades—H. W. Cutshall, Wilbur Davis, Raymond Hermann, L. S. Osborn, G. L. Walters.

Fairmont Railway Motors, Inc., Fairmont, Minn.—Inspection car; section car; and extra-gang bridge and building car—C. P. Benning, W. D. Brooks, Kenneth Cavins, W. G. Day, Arthur R. Fletcher, W. F. Kasper, J. T. McMahon, V. Pagett, Ralph W. Payne, C. L. Rager, W. H. Ripken, H. A. Sly, J. P. Wainscott, William Williamson.

Hayes Track Appliance Company, Richmond, Ind.—Literature and models of bumping post, derails and wheel stops—S. W. Hayes, Jr., Herbert J. Mayer, John H. Sullivan.

George M. Hogan & Co., Chicago—One-man track tool—V. G. Cartier, J. T. Flynn, G. M. Hogan, G. M. Hogan, Jr., D. L. O'Brien.

Ideal Power Lawn Mower Company, Lansing, Mich.—Tractor and snow plow; straight type roto-sweeper—L. L. Beresford, Robert E. Bradley.

Illinois Malleable Iron Company, Railroad Division, Chicago—Rail anchors—Chas. G. Ericson, Dayton T. Hogg, John C. Kuhns, H. A. Morean.

Ingersoll-Rand Company, New York—Spot tamper compressor; screw spike driver; rail drill; grinder; wood borer; impact wrench; track wrench; tie tamper; spike driver; and cribbing fork—G. E. Bridge, W. J. Heinz, H. L. Kent, K. I. Thompson.

O. F. Jordan Company, East Chicago, Ind.—Model and pictures of spreader ditcher and snow plow—A. W. Banton, J. C. Forbes, H. M. McFarlane, C. W. Shipley.

Joyce-Cridland Company, Dayton, Ohio—Air motor jacks; automatic lowering jacks; journal jacks; bridge jacks; self-lowering ball bearing screw jacks; track or trip jacks—Huston Brown, C. N. Thulin, E. E. Thulin.

Kalamazoo Railway Supply Company, Kalamazoo, Mich.—One-man inspection car; light section motor car; signal-maintainer car; motor-car wheels; track gage and level; and extra gang power car—L. Boswell, G. E. Bridge, Ralph E. Keller, Frank E. McAllister, Robert McAllister, E. C. Poehler, P. J. Robischung.

Link-Belt-Speeder Corporation, Chicago—Photograph of shovels and locomotive cranes—L. P. Spillan, N. A. Weston.

Lundie Engineering Corporation, New York—Rail clips; tie plates; tie tongs; rail lubricator—L. B. Armstrong, O. W. Youngquist.

Maintenance Equipment Company, Chicago—Switch-point protector; rail and flange lubricator; derail; and literature on rail layer—E. Overmier, T. E. Rodman, P. J. Wolf, P. A. Wells.

Mall Tool Company, Chicago—Gasoline and electric rail grinders; cross slotters; concrete vibrators and surfacers; bridge and building machines; gasoline, electric and air-driven chain saws; gasoline and electric drills and circular saws; power wrenches; flexible-shaft grinders and polishers—R. F. Burgwald, S. Gromnicki, J. Innes, A. W. Mall, F. A. McGonigle, M. Rhenquist.

Mississippi Supply Company, Chicago—Switch heater; tie nipper—R. J. Mulroney.

Morden Frog & Crossing Works, Chicago—Adjustable rail braces; forged-steel braces; Sampson switch point; standard switch point; new saw-toothed adjustment for adjustable braces—E. C. Argust, W. Homer Hartz, G. F. Killmer, L. I. Martin, L. C. Reebs.

Moto-Mower Company, Chicago—Power sickle-bar mower; power lawn mowers; and hand mowers—L. C. Meskimen, J. O. Spottswood, Mrs. L. C. Meskimen.

Nordberg Manufacturing Company, Milwaukee, Wis.—Rail grinders; track power drills; power track wrench; utility rail grinders; surface grinders; precision grinders; accessories—C. P. Clemmens, W. W. Fitzpatrick, C. K. Jensch, John Hogan, Eugene Larson, Ralph W. Payne, F. M. Read, Stanley H. Smith, H. H. Talboys, W. E. Bugbee.

Northwestern Motor Company, Eau Claire, Wis.—Bridge-and-building gang car; all-service section car; light all-service car; heavy-duty extra gang and hump cars—F. W. Anderson, Otis B. Duncan, Geo. H. Goodell, Gilbert Heithaus, C. E. Murphy, A. H. Nelson.

Oliver Iron & Steel Corporation, Pittsburgh, Pa.—Gage rods; heat-treated track and switch bolts; screw spikes; drive spikes; and wrench-tite nuts—B. J. Beck, G. M. Daly, J. G. Graham, John R. Olsen.

Oxweld Railroad Service Company, Chicago—Oxy-acetylene welding and cutting apparatus; oxygen; acetylene; carbide; rail butt welding; heat-treating of rail ends; pipe welding; wrinkle bending pipe; angle bar straightening; acetylene flood lights, railroad type—Lem Adams, M. C. Beymer, G. P. Bogert, M. Burnett, Jr., W. E. Campbell, R. J. Dodds, W. E. Donalds, F. J. Duffie, H. V. Gigandet, E. B. Hall, Jr., F. C. Hasse, P. Hunter, Jr., J. W. Lacey, G. B. Moynahan, J. H. Rodger, H. W. Schulze, J. C. Stephenson, F. E. Teichen, J. E. Winslow.

P. & M. Company, Chicago—Rail anti-creepers; bond-wire protectors; and tie plate assemblies—S. M. Clancey, J. J. Gallagher, D. T. Hallberg, G. E. Johnson, L. S. Johnson, J. E. Mahoney,

W. A. Maxwell, F. A. Preston, G. E. Olson, M. K. Ruppert.

Pettibone Mulliken Corporation, Chicago—Mechanical switchman; switch stands—W. A. Enstrom, C. A. Johnson, Carl Landberg, W. E. Olds, G. J. Slibeck.

Pocket List of Railroad Officials, New York—Copies of Pocket List of Railroad Officials—Harold A. Brown, B. J. Wilson.

Positive Rail Anchor Company, Chicago—Rail anchors; guard-rail plates and braces; adjustable rail braces—L. C. Ferguson, R. J. Platt.

Power Ballaster Company, Chicago—Motion pictures of power track ballaster and power track cribbing machines; ballast cleaning machine—W. E. Bugbee, Ralph Payne, F. H. Philbrick, L. L. Schreck, Stanley H. Smith.

Q & C Company, New York—Guard-rail clamp; switch-point guard; compromise joints; derail; gaging tools; wheel stops; rail tongs; gage rods; flangeway guard; adjustable rail brace; electric switch heater—G. H. Goodell, M. Iseldyke, L. E. Hassman, G. Prest, Lewis Thomas.

Rail Joint Company, Inc., The, New York—Insulated rail joints; standard joints; compromise joints; and fibre insulation—Alex Chapman, E. A. Condit, W. E. Gadd, Harry C. Hickey, G. H. Larson, J. N. Meade, R. W. Payne, C. H. Reade, Thomas Ryan.

Rails Company, The, New Haven, Conn.—M. & L. track; compression track fastenings; compression screw spike; full-throated cut spike; oil, gas and electric switch heaters; track lubricator; spring spike; automatic switch lock; strip welding for building up battered rail ends; acetylene tank carrier—R. E. Bell, L. T. Burwell, W. A. Peck, J. V. Wescott.

Railway Engineering and Maintenance, Chicago—Copies of Railway Engineering and Maintenance and Railway Age—G. E. Boyd, C. M. Burpee, M. H. Dick, S. W. Hickey, N. D. Howard, Elmer T. Howson, F. C. Koch, J. G. Little, C. W. Merriken, H. A. Morrison, J. S. Vreeland.

Railway Maintenance Corporation, Pittsburgh, Pa.—RMC plastic cakes for joint lubrication; pictures of elastic stop nut—John F. Casey, Jr., J. B. McWilliams.

Railway Purchases and Stores, Chicago—Copies of publication—K. F. Sheeran, Edward Wray.

Ramapo Ajax Division, American Brake Shoe & Foundry Company, New York—Switch stands; rail lubricators—T. E. Akers, G. A. Carlson, J. E. Davidson, R. E. Einstein, H. Hazelton, A. F. Hess, Darcey F. Hilton, J. V. Houston, A. F. Huber, J. S. Hutchins, J. P. Kleinkort, E. F. Needham, R. W. Payne, W. A. Peddle, H. W. Renick.

Railway Track-Work Company, Philadelphia, Pa.—Portable track grinders; stock-rail grinders; flexible-shaft grinders; combination grinders; accessories; grinding wheels—H. M. Moorhead, A. M. Nardini.

Sperry Rail Service, Hoboken, N. J.—Examples of transverse fissures, engineburn fractures and flash butt welds; literature—E. A. Crawford, J. C. Davis, C. W. Gennet, Jr., W. F. Kohl, S. R. Lewis, C. K. Mentz, S. P. Murphy, H. C. Plunkett

Templeton, Kenly & Co., Ltd., Chicago—Track, bridge and journal jacks, with exclusive wheel hold-down; car-retarder jacks; tie spaces; rail puller and expander—W. C. Cornu, H. C. Dilsizian, R. B. Hill, W. H. Kreer, P. H. McManus, William Simpson, J. B. Templeton, W. B. Templeton.

Warren Tool Corporation, Warren, Ohio—Flex-Toe claw bar; track tools—W. H. Bon, F. J. Lehman, Howard Mull, O. W. Youngquist.

Wheeler Lumber Bridge & Supply Co., Des Moines, Iowa—Laminated crossings and culverts—C. M. Mitchell.

Woodings-Verona Tool Works and Woodings Forge & Tool Company, Verona, Pa.—Rail anchors; triflex springs—W. W. Doehn, A. C. Laesing, R. J. McComb, G. L. McKewin, J. M. Moore, E. Woodings, W. H. Woodings.

Woolery Machine Company, Minneapolis, Minn.—Tie cutting machine; creosote-spray machine—A. J. Franke, H. E. Woolery, W. F. Woolery.

Worthington Pump & Machinery Corp. (Construction Equipment Division), Holyoke, Mass.—Off-track tie-tamper compressor—P. A. Blakeley, A. L. Davis, S. F. Evelyn, W. J. Fleming, G. W. Morrow, H. J. Ryan, H. J. Shultz.

First Report of Transport Study Board

Making its first report to the President and Congress on September 18, the Board of Investigation and Research established under the Transportation Act of 1940 reviewed briefly the preliminary steps taken during the initial month of its existence, saying that the general framework of the board's organization and procedure have been determined upon, and detailed plans for its research projects are being formulated. Also, as anticipated in the *Railway Age* of September 20, page 461, the board stated that it would seek an appropriation in addition to the $100,000 which it now has for the current fiscal year ending June 30, 1942.

The report, filed one year after approval of the Transportation Act, came in response to that provision which requires the board to submit "an annual report." The act also called for "preliminary reports" on or before May 1, 1941; but the delay in bringing the board into existence precluded meeting that requirement. As the present report points out, the members of the board, who are Nelson Lee Smith of New Hampshire, Robert E. Webb of Kentucky, and C. E. Childe of Nebraska, did not take the oath of office until August 22.

Commenting on the report, Chairman Smith said: "The task confronting us is a huge one. The nation's transportation systems are far-flung and complicated. It is the intention and determination of the board to make a study and report which will benefit the general public as well as the various types of carriers."

The report itself opened with a brief outline of the board's assignment and of the aforementioned requirements as to reports. It went on to tell of the board's preliminary activities; of its plan to seek the cooperation of all private and governmental agencies interested in transportation; and of its disposition "to avoid unnecessary and wasteful duplication of effort" by utilizing "to the fullest possible extent materials and personnel which may already be available."

"The board," said the report, "is endeav-

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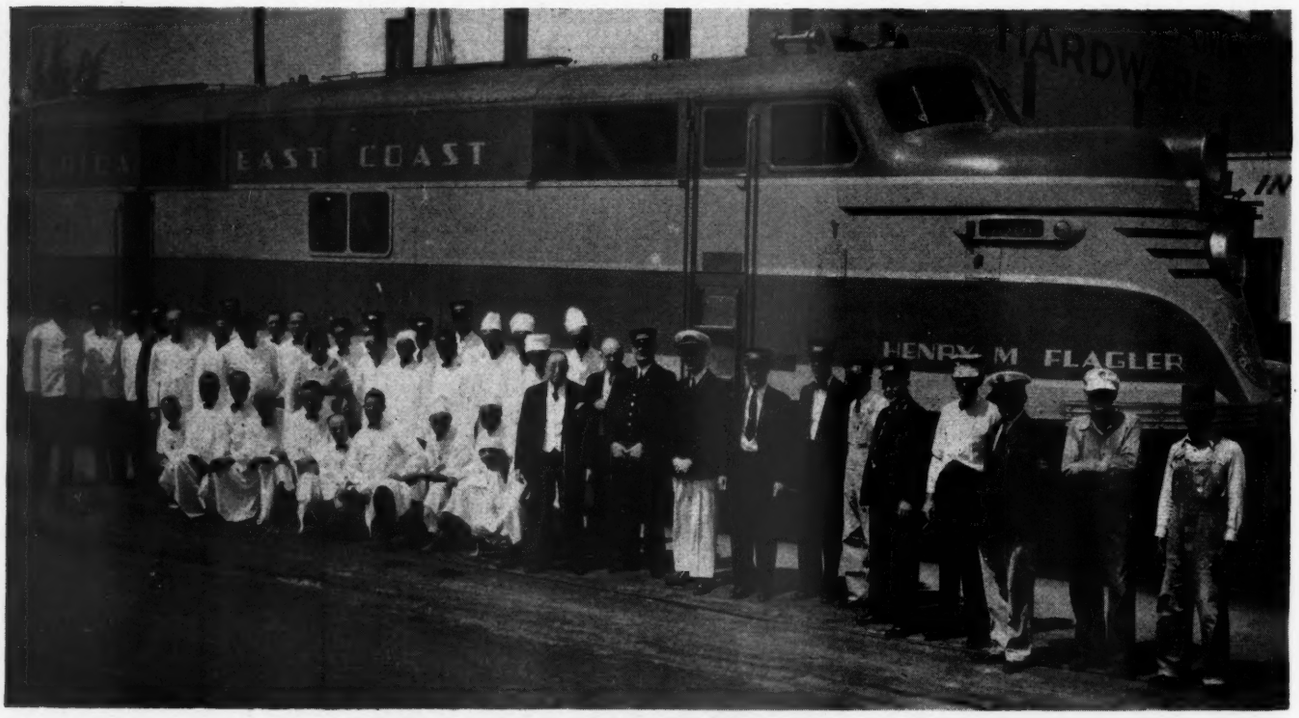

A Modern Streamliner Takes a Deal of Manning

It takes 44 employees to keep passengers happy on the Atlantic Coast Line—Florida East Coast streamliner "The Champion". This photograph of the streamlined, 14-car, all-coach train just before departure from Miami, Fla., to New York recently shows the classes of employees in order from left to right: Pullman porters, coach attendants, tavern car crew, maid, dining car waiters, chefs, dining car stewards, Pullman conductor, passenger agent, brakeman, baggage master, conductor, engineer, passenger agent, Diesel maintainer, and fireman.

Continued on next left-hand page

"THE *Daylights*"...

A success story in modern railroading

More than six years ago the Southern Pacific placed an order with the Lima Locomotive Works for six high-speed super-power steam locomotives of the type illustrated above. The immediate public approval of these new trains was so great that during the next five years the Southern Pacific placed orders for forty-four additional Lima-built steam streamliners.

The traveling public in your locality has the same appreciation of streamlined speed and beauty as the riders of the "Daylights". Capitalize on this appreciation by installing Lima-built steam streamliners on your crack passenger runs . . . . the resultant increase in passenger traffic and good-will will show a marked upturn on your passenger revenue sheets.

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED INCORPORATED, LIMA, OHIO

oring to gather comprehensive and authoritative information as to existing data, research projects which are in progress within the field of its activities under the congressional mandate, and personnel which may be able to assist in its work . . .

"The statute specifically authorizes the utilization by the board of the services, information, facilities, and personnel of other departments and agencies of the government to the extent that this will not interfere unduly with their regular work and duties. The board has received valuable assistance from other departments in connection with its initial problems of organization. It expects to continue to seek and utilize such help whenever feasible, but it is already clear that changed conditions since the enactment of the legislation creating the board have imposed unforeseen burdens upon many agencies from which assistance might otherwise have been expected. It therefore appears that less can now be accomplished through the staffs and facilities of other governmental agencies than was originally anticipated."

Then came the reference to the board's present appropriation of $100,000, the report continuing to say: "As the testimony regarding the appropriation indicates, this amount was provided simply to permit the board to begin its work; it was expected that additional funds would be required to permit the board to perform its duties under the act. As soon, therefore, as the necessary preliminary explorations of available materials, facilities, and personnel have progressed far enough to permit the development of detailed plans of a more specific nature, the board will submit an estimate of the funds necessary to enable it to function effectively and to conduct the studies which it has been directed by the congress to make."

Meanwhile, on September 22, the board announced the appointment of Lewis H. Guenther as administrative officer. Mr. Guenther, who is a civil service employee, has been with the government for 24 years, most recently as administrative accountant with the Home Owners' Loan Corporation.

Illinois Central Gets Trucking Certificates

Certificates covering common-carrier trucking operations on seven routes between points in Kentucky and Tennessee have been conditionally granted to the Illinois Central by the Interstate Commerce Commission, Division 5. The conditions are the usual ones designed to insure that the highway services shall remain auxiliary to or supplemental of rail service.

The I. C. proposes to render the service with equipment leased from the Railway Express Agency; and in that connection the commission, citing leading cases on the point, states that "if such vehicles be used, it will be necessary that they be operated under the direction and control of applicant and under its responsibility to the general public as well as shippers and they may not be operated under the direction, control, and responsibility of the Express Agency."

Equipment and Supplies

LOCOMOTIVES

U. S. War Department Inquiring for 200 Steam Locomotives

The United States War Department is reported to have issued inquiries for the immediate purchase of a considerable number of steam locomotives of the 2-8-2 type. The quantity to be ordered is estimated at between 100 and 200 locomotives, and likely to total 200. (The British Purchasing Commission was also reported, earlier this month, to be inquiring for 50 steam locomotives of the 2-8-0 type.) These reports have not been officially confirmed. Plans call for materials for these locomotives to receive an A-1-A priority rating and it is understood the specifications for some of the War Department locomotives indicate that they may be intended for export. Production of these locomotives is said to be scheduled for division among the several leading steam locomotive builders.

THE LOUISIANA SOUTHERN has ordered one 45-ton Diesel-electric locomotive from the General Electric Company.

THE STONE & WEBSTER ENGINEERING COMPANY has ordered one 47-ton fireless steam locomotive from the H. K. Porter Company.

THE DETROIT, TOLEDO & IRONTON is reported to be considering the purchase of from two to four Mikado type steam locomotives.

THE NATIONAL STEEL COMPANY OF BRAZIL is inquiring for a total of eight steam locomotives comprising six of the 0-6-0 type and two of the 0-8-0 type.

FREIGHT CARS

Egyptian State Railways to Buy 2860 Cars

The Egyptian State Railways are reported to be inquiring for a total of 2,860 freight cars as follows:

1,200—34-ft., 40-ton steel box
1,200—34-ft., 40-ton low-side gondola
400—34-ft., 40-ton flat
60—caboose

THE TENNESSEE COAL, IRON & R. R. Co. is inquiring for 10 air-dump cars of 70 tons' capacity.

THE LEHIGH VALLEY is planning the purchase of 1,000 coal cars but is not as yet in the market for this equipment.

THE CANADIAN PACIFIC has placed an order for 50 hopper cars of 70 tons' capacity with the Eastern Car Company.

THE NATIONAL RAILWAYS OF MEXICO are inquiring for 100 flat cars of 50 tons' capacity. These are in addition to inquiries now outstanding for 1,000 50-ton box cars, reported in the *Railway Age* of August 2, and for 150 40-ton stock cars and 100 50-ton gondola cars, reported in the *Railway Age* of September 13.

THE UNITED STATES ARMY, engineering department, has placed an order for dump cars with the Pressed Steel Car Corporation, at cost of $43,825.

THE CHICAGO, INDIANAPOLIS & LOUISVILLE has placed an order for 300 box cars of 50 tons' capacity with the Pullman-Standard Car Manufacturing Company.

THE UNITED STATES NAVY DEPARTMENT is inquiring for ten steel-sheathed box cars of 40 tons' capacity and 12 40-ft. steel-underframe flat cars of 40 tons' capacity for delivery to the naval supply depot, Oakland, Cal.—schedule 8765.

IRON AND STEEL

THE UNITED STATES ARMY, engineering department, has placed an order for rails with the United States Steel Export Company at total cost of $70,379.

SIGNALING

THE AMERICAN LOCOMOTIVE COMPANY has placed an order with the General Railway Signal Company, Rochester, N. Y., covering 15 intermittent inductive auto manual train control engine equipments for New York Central locomotives.

THE ELECTRO-MOTIVE CORPORATION, La Grange, Ill., has placed an order with the General Railway Signal Company, Rochester, N. Y., covering ten sets of intermittent inductive train control engine equipment for Diesel locomotives, eight being for Atlantic Coast Line and two for Florida East Coast locomotives.

THE ILLINOIS CENTRAL has lately placed orders with the Union Switch & Signal Co. for nine model 31 electro-pneumatic car retarders (700 rail ft.) for installation in the northbound Markham classification yard. These retarders are being installed by the railroad's regular field construction forces in replacement of older type retarders in this yard.

THE BOSTON & ALBANY has placed an order with the General Railway Signal Company, Rochester, N. Y., covering direct current block signal material to be installed between Boston, Mass., and Allston. Included in order are 30 type SA color-light signals, 15 type W color-light signals, 57 line and track rectifiers, 225 type K relays, 9 Model 7 switch circuit controllers, 12 welded steel housings, 24 type W relays and necessary transformers.

MACHINERY AND TOOLS

THE UNITED STATES WAR DEPARTMENT has placed an order for a locomotive crane with the Cullen-Friestedt Company of Chicago, at cost of $13,820.

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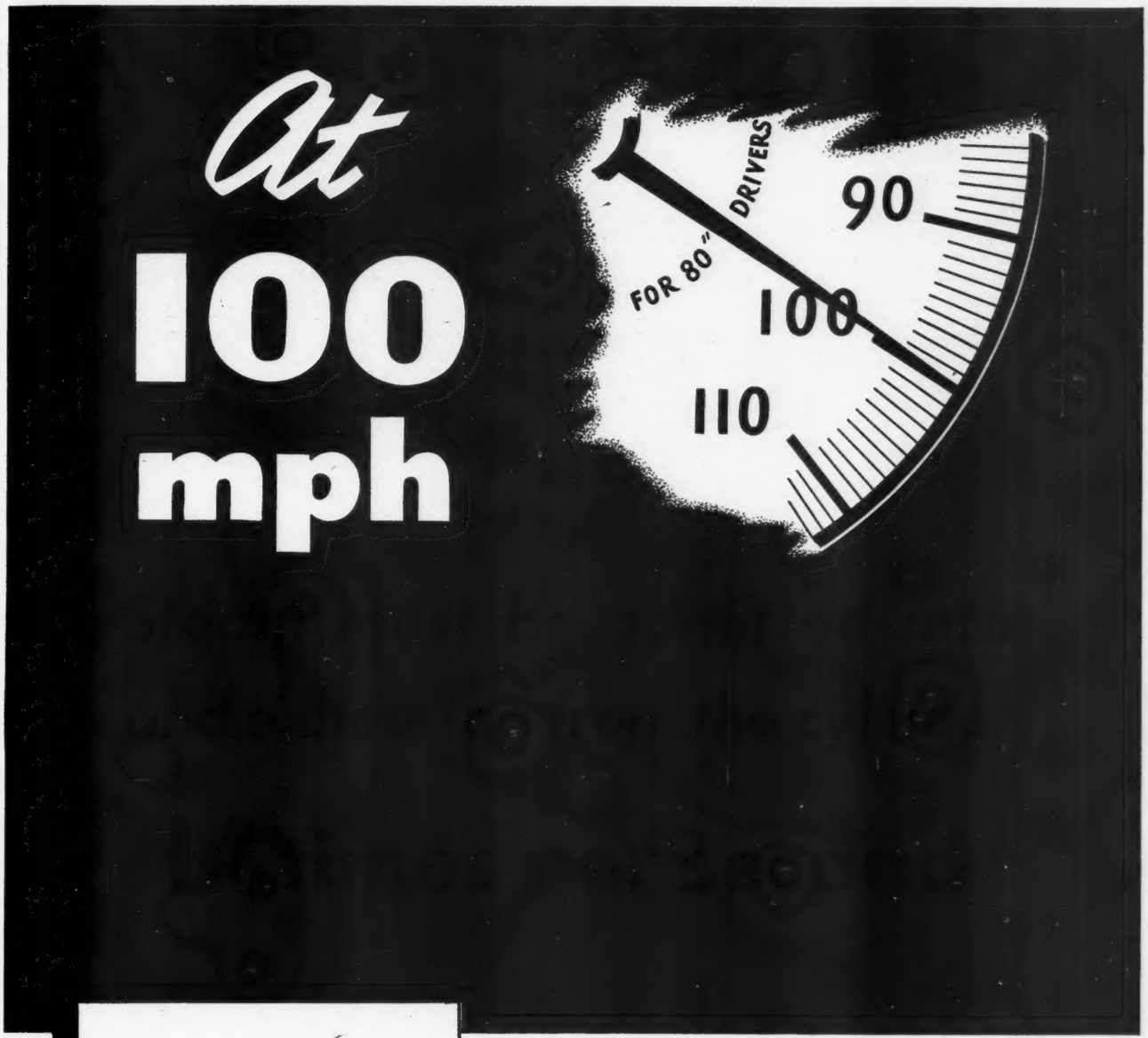

THE
FRANKLIN
SYSTEM
OF
Steam
Distribution

Through The Franklin System of Steam Distribution it is possible to accomplish this with greater effectiveness than it is with the old piston valve and conventional valve gear. The result is a ⅓ increase in train load-speed capacity from eighty to one hundred miles per hour. By the application of poppet valves, which are an integral part of The Franklin System of Steam Distribution, larger intake and exhaust areas are secured which remove the restrictions that exist in the piston valve type locomotive. » » » The Franklin System of Steam Distribution will enable you to build either smaller locomotives with the same horsepower or the same size locomotives with even greater horsepower.

FRANKLIN RAILWAY SUPPLY COMPANY, INC. NEW YORK CHICAGO
In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

Construction

CHICAGO & NORTH WESTERN.—An improvement program costing approximately $450,000 is under way in the Chicago & North Western shops in the Chicago area. The principal feature of this project is the construction of a servicing yard for streamlined trains in the vicinity of the company's shops at Fortieth street and the transfer of the present servicing facilities for these trains to the new location. This necessitates the building of three inspection pits for the inspection of complete trains and power plants, suitable drop pits for changing wheels and a transfer table to permit changing of complete power trucks under the Diesel-electric locomotives. The pits have been designed so that duplicate servicing units may be added later as required. The estimated cost of this project alone is approximately $370,000. Other work in this improvement program includes the construction of a mechanical drop pit table, an extension to the machine shop for repair work on locomotives and the construction of a locomotive blow-off tank at the Proviso, Ill., freight yards.

INDIANA HARBOR BELT.—A contract has been awarded the Ross & White Co., Chicago, for the erection, including foundation construction, of an N. & W. type electric cinder plant at Franklin Park, Ill.

NEW YORK, NEW HAVEN & HARTFORD.—Diesel sand towers and sanding equipment for installation at New Haven, Conn., have been ordered from the Ross & White Co., Chicago.

NORTHERN PACIFIC.—The Northern Pacific will extend its yard tracks and make other track changes at Parkwater, Wash., and Pasco, at an estimated cost of $60,000 and $87,000, respectively. All work will be handled by company forces.

NORTHERN PACIFIC.—Work has been started by company forces on a line change of 0.7 mile of double track at Vader, Wash., which involves the construction of a double track bridge 238 ft. long, consisting of three double-track deck plate girder spans on concrete piers and abutments. The cost of the entire project will be approximately $170,000.

PANHANDLE & SANTA FE.—A contract has been awarded Cook & Ransom, Ottawa, Kan., for a flood protection project in Frio draw at Friona, Tex. The project will involve 200,000 cu. yd. of grading for the construction of dykes, and some bridge work.

SEABOARD AIR LINE.—A contract has been awarded the Ross & White Co., Chicago, for furnishing and the construction of two complete fireproof locomotive coaling and sanding plants, one of 100-ton capacity to be built at Cedartown, Ga., and the other of 200-ton capacity to be built at Norlina, N. C.

SOUTHERN PACIFIC.—The Bureau of Reclamation, Denver, Colo., has awarded a contract amounting to $100,088 to Scheumann and Johnson, Eureka, Cal., for the construction of station facilities, water supply and sewerage systems at Buckeye, Cal., Boomtown, O'Brien Creek and Lakehead, on the 30-mile relocated line of the Southern Pacific north of Redding, Cal. The work includes constructing a concrete dam, a well and pumphouses, and installing pipe lines, pumping units, chlorinating units, locomotive supply columns, septic tanks and disposal fields.

UNION PACIFIC.—The Bureau of Reclamation, Denver, Colo., will receive sealed bids until October 8, for furnishing and delivering structural steel for a bridge over the Payette River on the relocation of the Idaho Northern branch of the Oregon Short Line (part of the Union Pacific system), for the Cascade Reservoir, Boise project, Idaho.

WABASH.—Contracts have been awarded the Ross & White Co., Chicago, for the erection complete, including foundations, of two Red Devil engine coalers, one to be installed at Moulton, Iowa, and the other at St. Louis, Mo.

Supply Trade

J. A. Sauer, executive vice-president of the **Symington-Gould Corporation,** has been elected a director of that company to succeed the late **C. Loonis Allen.**

B. E. Middleton, formerly Chicago representative for the **McKenna Metals Company,** has been appointed to represent that company in the central New York territory, with headquarters at 217 East avenue, Rochester, N. Y.

Louis B. Neumiller, vice-president of the Caterpillar Tractor Company, Peoria, Ill., has been elected president, with headquarters as before at Peoria, succeeding **B. C. Heacock,** who has been elected chairman of the executive board, relieving **R. F. Force,** resigned.

Frank R. Wood, secretary of the **P. & M. Company, Ltd.,** Canada, at Montreal, Que., has been promoted to acting managing director, with headquarters as before at Montreal, succeeding **Gordon Willoughby Dunn,** whose death on September 14 is reported elsewhere in these columns.

The **United States Wind Engine & Pump Co.,** Batavia, Ill., has been sold to a Chicago syndicate represented by **F. Joseph Clark,** vice-president of the Interstate Machinery Corporation, Chicago, and Mr. Clark has been elected president of the United States Wind Engine & Pump Co., succeeding **Channing Turner.**

James A. Farquharson has joined the staff of the **O. C. Duryea Corporation** as district representative, with headquarters in the Insurance Building, 907 Fifteenth street, N. W., Washington, D. C. Mr. Farquharson was formerly national legislative representative of the Brotherhood of Railroad Trainmen.

C. A. Ohl has been appointed assistant general manager of the **Bendix-Westinghouse Automotive Air Brake Company,** with headquarters at the company's new home at Elyria, Ohio. **A. Vance Howe** has been appointed manager of manufacturers' sales and **A. J. Bent** manufacturers' sales representative for this company.

W. T. Capps, formerly stoker supervisor of the Baltimore & Ohio, has been appointed sales engineer of **The Standard Stoker Company, Inc.** Mr. Capps began his business career as a special apprentice with the American Locomotive Company in 1909. In 1912, he was engaged by the Locomotive Stoker Company as draftsman and stoker engineer, which position he held until June, 1917, when he enlisted for service with the 19th Railway Engineers, United States Army. Upon his return from overseas service in July, 1919, he re-entered the employ of the Locomotive Stoker Company as a stoker engineer, in which capacity he remained until February, 1928. Shortly thereafter he was appointed stoker supervisor of the Baltimore & Ohio, which position he held until his current appointment.

Underwood & Underwood

W. T. Capps

OBITUARY

John R. Sexton, eastern sales manager of the Standard Stoker Company, Inc., New York, with headquarters at New York, died on September 22 at the St. Luke's hospital, Chicago.

Gordon Willoughby Dunn, vice-president and managing director of the P. & M. Company, Ltd., Canada, and vice-president of Engineering Materials, Ltd., with headquarters at Montreal, Que., died at his home in that city on September 14 at the age of 56. Mr. Dunn was a graduate of McGill University and was prominent in athletics, serving for many years as president of the Canadian Amateur Ski Association.

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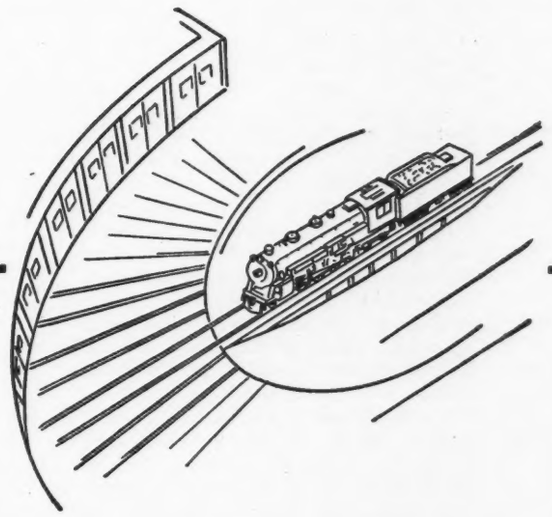
SPECIAL BRICK

SHAPES

...are a nuisance



The initial standardization of Arch Brick shapes and sizes and Arch tube spacing was the work of the American Arch Company.

It is a work that goes forward constantly and saves the Stores and Mechanical Departments a vast amount of trouble.

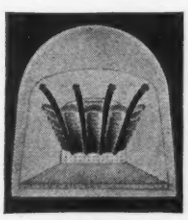
The easiest solution to many a locomotive Arch engineering difficulty would be to use a special brick shape. But this the American Arch Company is willing to do only as a last resort. Over 50 % of all Arch Brick is covered by 6 separate patterns.

The insistence of American Arch Company on adhering to standards has simplified the work of the Storekeeper and Maintenance Man. It is only one of the many ways in which American Arch Company is serving the railroads.

THERE'S MORE TO SECURITY ARCHES THAN JUST BRICK

HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists



AMERICAN ARCH CO.
INCORPORATED
60 EAST 42nd STREET, NEW YORK, N. Y.
Locomotive Combustion Specialists

Financial

ATCHISON, TOPEKA & SANTA FE.—*Bonds.*—This road will redeem an entire issue of $28,070,500 of outstanding 4½ per cent debentures, due December 1, 1948, at 102 and accrued interest on December 1, 1941, through the use of funds now on hand in the corporate treasury. Announcement of the road's intention was made on September 23 following a meeting of the board of directors. The redemption will save the carrier $1,263,173 annually in interest charges, besides improving its already outstanding low ratio of fixed debt to capital stock.

BOSTON & MAINE.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon its so-called Milford branch extending from Squannacook Junction, Mass., to Pepperell, six miles.

CENTRAL OF GEORGIA.—*Abandonment by the Chattahoochee & Gulf.*—The Chattahoochee & Gulf and the Central of Georgia, respectively, have been authorized by Division 4 of the Interstate Commerce Commission to abandon a line and the operation thereof, extending from Hartford, Ala., to Lockhart, 48.3 miles.

CENTRAL OF NEW JERSEY.—*Reorganization.*—Formulation of a plan of reorganization for this road has been further delayed by litigation initiated recently by Attorney General David Wilentz of New Jersey to have declared unconstitutional laws recently enacted by the state legislature relieving New Jersey roads of interest and penalties on unpaid taxes of past years and revamping the method of taxation for the future. This statement was made by E. W. Scheer, president of the road, at a stockholders' meeting held in Jersey City, N. J., on September 19. "If the revised laws are declared unconstitutional our taxes will be higher than ever, what with the 3 per cent physical property taxes and the 3 per cent franchise tax, although in such event I believe the legislature will take action to give us some relief from these taxes." The Central of New Jersey went under the protection of Section 77 in 1939 principally to protect its property from collection by the state of taxes unpaid in part since 1932.

CHICAGO, BURLINGTON & QUINCY.—*Abandonment.*—This company has requested permission from the Interstate Commerce Commission to abandon a branch line extending from Prague, Nebr., to Schuyler, 18.8 miles. The company estimate the net salvage value of the line at $69,440.

CHICAGO, BURLINGTON & QUINCY and COLORADO & SOUTHERN.—*Elected to executive committees.*—Wallace Winter of Harris, Upham & Company, Chicago, has been elected to the executive committees of these two roads, succeeding the late Arthur Curtiss James.

ERIE.—*Bonds.*—This road awarded a new issue of $18,000,000, Ohio division, first mortgage, 3¼ per cent bonds, due September 1, 1971, to the First Boston Corporation and associates on September 23. The successful group had bid 101.0959, representing an interest cost to the carrier of about 3.19 per cent.

The bonds are being offered to the public at a price of 102½ per cent for principal amounts up to $499,000 and at a price of 101¾ per cent for principal amounts of $500,000 or more, plus accrued interest in both cases. Proceeds of the issue, together with other funds, will be used to redeem $18,057,000 principal amount of outstanding bonds represented by four different issues. The latter consists of $8,000,000 of New York, Pennsylvania & Ohio prior lien 4¼s, due 1950; $2,816,000 of Cleveland & Mahoning Valley first mortgage 4s, due 1962; $6,700,000 of Cleveland & Mahoning Valley collateral trust 4s, due 1949, and $541,000 of Raven Terminals Company first mortgage 4s, due serially to 1955.

Sale of the bonds represents one of the rare instances in which a railroad has sold a long-term mortgage bond issue in competitive bidding. Unlike equipment trust certificates, no legal requirement exists for the sale of ordinary railroad bonds through competitive bidding. The carriers have almost always sold such issues by private placement.

Also a new departure in finance technique is the offering of the new bonds in two classes—smaller lot purchases bearing a higher price than purchases of $500,000 and upward. This is evidently an attempt by the investment house group to recognize the necessity of giving concessions to large institutional investors, who might otherwise buy whole issues direct from the issuer, thereby giving the investment houses the "run-around."

The new bonds constitute a closed mortgage on 551 mi. of route, including 303 mi. of the New York-Chicago main line and the busy ore, coal and steel line between Cleveland, Ohio, and Youngstown.

KANAWHA CENTRAL.—*Promissory Note.*—This company has asked the Interstate Commerce Commission for authority to issue a $16,202 promissory note to the Chesapeake & Ohio which would mature on or before five years from the date of issue. The note would bear interest at the rate of six per cent and the company will pledge secured promissory notes in the aggregate face amount of $16,000 as collateral security for it.

KANSAS, OKLAHOMA & GULF OF TEXAS.—*Bonds.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to extend from January 3, 1941, to July 1, 1978, the date of maturity of $483,500 of first mortgage, five per cent gold bonds, to bear interest during the extended period at the existing rate of five per cent, payable semi-annually on January 1 and July 1, instead of January 3 and July 3, as heretofore.

MISSOURI PACIFIC.—*Equipment Trust Certificates.*—This company has asked the Interstate Commerce Commission for authority to assume liability for $1,150,000 of equipment trust certificates, maturing in 10 equal annual installments of $115,000 on October 15 in each of the years from 1942 to 1951, inclusive. The proceeds will be used as a part of the purchase price of new equipment costing a total of $1,442,500 and consisting of two 4,000 h. p. Diesel-electric passenger locomotives and 11 streamlined, stainless-steel passenger cars. The passenger cars are to be divided into the following categories: One mail-storage car, two baggage-express cars, two baggage-mail cars, two deluxe coaches, two coach-grill crew cars, and two diner-lounge cars.

NEW YORK, CHICAGO & ST. LOUIS.—*Equipment Trust Certificates.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for $5,800,000 of 2⅛ per cent equipment trust certificates, maturing in 10 equal annual installments of $580,000 on September 1 in each of the years from 1942 to 1951, inclusive. The issue has been sold at 100.389 to Salomon Brothers & Hutzler, acting on behalf of itself and Dick & Merle-Smith and Stroud & Co., Inc., making the average annual cost to the company approximately 2.05 per cent.

NEW YORK, NEW HAVEN & HARTFORD.—*Notes of the Union Freight.*—The Union Freight has asked the Interstate Commerce Commission to modify its report and order in Finance Docket No. 12535 wherein it was authorized to issue in favor of the New York, New Haven & Hartford a promissory note in the amount of $192,000, so as to limit the amount of the note to $90,000.

NEW YORK, ONTARIO & WESTERN.—*Equipment Trust Certificates and R. F. C. Financing.*—This company has asked the Interstate Commerce Commission to approve a plan whereby it would issue and sell to the Reconstruction Finance Corporation $162,900 of 2¾ per cent equipment trust certificates, maturing serially at the rate of $8,145 every six months until final payment on November 1, 1951. The proceeds will be used as a part of the purchase price of new equipment costing a total of $181,000 and consisting of five new Diesel-electric, 44-ton switching locomotives.

Average Prices of Stocks and Bonds

	Sept. 23	Last week	Last year
Average price of 20 representative railway stocks..	29.74	29.79	30.45
Average price of 20 representative railway bonds..	63.55	64.10	60.56

Dividends Declared

Carolina, Clinchfield & Ohio.—$1.25, quarterly, payable October 20 to holders of record October 10.

Joliet & Chicago.—Stamped Com., $1.75, quarterly, payable October 6 to holders of record September 25.

Providence & Worcester.—$2.50, payable October 1 to holders of record September 10.

St. Joseph, South Bend & Southern.—75¢; 5 Per Cent Preferred, $2.50, semi-annually; both payable September 20 to holders of record September 10.

Wheeling & Lake Erie.—$1.00, payable October 1 to holders of record September 29.

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marks the Spot . . .

that is responsible for a 12%-15% increase in boiler capacity or a corresponding decrease in water and fuel consumption.

It identifies the normal location of the Elesco exhaust steam injector . . . an open type of feedwater heater that gives the maximum in heat transfer per unit of weight and cost.

The number in service on American railroads is increasing steadily.

ELESCO

Superheaters
Feedwater Heaters
Exhaust Steam Injectors
Superheated Steam Pyrometers
American Throttles
Tangential Steam Dryers

THE
SUPERHEATER
COMPANY

Representative of
AMERICAN THROTTLE COMPANY INC.
60 East 42nd Street, NEW YORK
122 S. Michigan Avenue, CHICAGO
Canada: THE SUPERHEATER COMPANY, LTD.
MONTREAL

A-1444

Railway Officers

EXECUTIVE

Herbert W. Johnson, comptroller of the Chicago, Burlington & Quincy, the Colorado & Southern and the Ft. Worth & Denver City, has been elected vice-president and comptroller of the Chicago, Burlington & Quincy and the Colorado & Southern, with headquarters as before at Chicago.

Clyde F. Farmer, assistant to the president of the Delaware, Lackawanna & Western, with headquarters at New York, has been elected vice-president (traffic), to succeed **Joseph J. Byrne,** who will retire on October 1 after 43 years of service with the railroad. A photograph of Mr. Farmer and a biographical sketch of his railway career were published in the *Railway Age* of August 9, in connection with his appointment as assistant to the president.

Jasper N. Haines, whose appointment as executive assistant to president of the Lehigh Valley at New York and Bethlehem, Pa., was reported in the *Railway Age* of August 16, was born at Pleasant Dale, W. Va. He was educated in the public schools and at Pittsburgh Academy and commenced his railway career on July 8, 1892, with the Pittsburgh & Lake Erie as yard clerk at Turner, Pa., and until April 2, 1898, he served successively as stenographer and clerk to the trainmaster at Pittsburgh, Pa. On August 8, 1898, he entered the service of the Lehigh Valley as stenographer to the superintendent at Hazleton, Pa., and in May, 1902, he was appointed chief clerk. In July, 1903, he was transferred to Wilkes-Barre, Pa., as chief clerk to the superintendent of the Wyoming division. From October, 1904, to November, 1907, he served as clerk and later as chief clerk to the general manager at South Bethlehem, Pa. On November 18, 1907, he was appointed inspector of transportation at Bethlehem and on August 1, 1909, he became trainmaster at Auburn, N. Y. From January 1, 1910, to June 20, 1914, he was assistant superintendent at Sayre, Pa., and on the latter date he was promoted to superintendent. Mr. Haines went to Bethlehem on July 23, 1918, and until January, 1931, served successively as assistant to operating assistant, assistant to general manager, superintendent of transportation and general superintendent of transportation. In January, 1931, he became general manager, the position he held until his recent appointment as executive assistant to president.

FINANCIAL, LEGAL AND ACCOUNTING

F. J. Krecek, assistant auditor of disbursements of the Union Pacific, has been appointed auditor of equipment service accounts, with headquarters as before at Omaha, Neb., succeeding **E. J. Doolin,** whose appointment as auditor of disbursements was reported in the *Railway Age* of September 20. **Scott Lord,** chief clerk in the treasurer's department has been promoted to assistant treasurer, with headquarters at Omaha, relieving **W. Scott Ure,** whose promotion to assistant general auditor, was also reported in the *Railway Age* of September 20.

Bert Vickery, assistant treasurer of the Chicago, Burlington & Quincy, has been promoted to treasurer and assistant secretary of the Burlington and also the Colorado & Southern and the Ft. Worth & Denver City, with headquarters as before at Chicago, succeeding **Andrew T. Williams,** who will retire on October 1. Mr. Williams was born in Chicago on September 9, 1871, and entered railway service in August, 1889, as a stenographer in the treasury department of the Burlington. He was promoted to assistant paymaster in 1903, to assistant cashier in 1911, to cashier in 1918 and to assistant treasurer in 1921. Mr. Williams was later appointed assistant secretary and assistant treasurer and in 1938 he was advanced to treasurer and assistant secretary, which position he held until his retirement.

Harry Steed Walker, whose promotion to senior assistant general auditor of the Union Pacific, with headquarters at Omaha, Neb., was reported in the *Railway Age* of September 20, was born in Princess Anne County, Va., on July 19, 1878, and attended Norfolk Academy, Norfolk, Va.

Harry Steed Walker

He entered railway service on July 1, 1900, on the Seaboard Air Line and in May, 1904, he went with the Gulf & Ship Island (now part of the Illinois Central System) as an agent at Gulfport, Miss., later serving as secretary-treasurer of Foote & Mohler, Wholesale grocers at that point and secretary-manager of the Gulfport Woodworking Company. In September, 1907, he returned to railroad service as an accountant for the Gulf & Ship Island at Gulfport and a year later he went with the Southern Pacific Lines in Texas and Louisiana as an assistant traveling auditor at New Orleans, later serving that road as head clerk of station accounts, head clerk of general accounts, both at New Orleans, and head clerk of disbursements accounts at Houston, Tex. In May, 1913, Mr. Walker was promoted to auditor for the lines in Louisiana, with headquarters at New Orleans, and in February, 1917, he was appointed assistant auditor for the lines in Texas, with headquarters at Houston. On July 1, 1920, he went with the Union Pacific as assistant to the general auditor at Omaha and in April, 1940, he was advanced to assistant general auditor, the position he held until his recent promotion.

Horace L. Walker, general attorney of the Chesapeake & Ohio, the New York, Chicago & St. Louis and the Pere Mar-

Horace L. Walker

quette, with headquarters at Richmond, Va., has been appointed general solicitor of these roads, succeeding the late **M. Carter Hall,** whose death on August 11 was reported in the *Railway Age* of August 16. Mr. Walker was born on March 21, 1888, at Lancaster, Ky., and attended the University of Kentucky and the Jefferson School of Law. He was associated with the law firm of Humphrey, Middleton & Humphrey at Louisville, Ky., from 1913 until February 1, 1917, when he became attorney for the Southern at Washington, D. C. From January 1, 1919, to March 1, 1920, he was assistant to vice-president and general counsel of the Southern at Washington and was commerce counsel there from March 1, 1920, to November 1, 1935. Mr. Walker served as attorney for a group of southeastern railroads and coast-wise steamship companies, with headquarters at Washington, from November 1, 1935, until September, 1938, when he was appointed general attorney of the Chesapeake & Ohio, the Pere Marquette and the New York, Chicago & St. Louis.

OPERATING

J. J. Winter has been appointed trainmaster on the Idaho division of the Union Pacific, with headquarters at Glenns Ferry, Idaho.

J. P. Horbury, train dispatcher of the Philadelphia Terminal division of the Pennsylvania, has been appointed acting assistant trainmaster of the Middle division at Lewistown, Pa.

William P. Libby, Jr., superintendent of car service of the New York, New Haven & Hartford, with headquarters at New Haven, Conn., has been appointed

Continued on next left-hand page

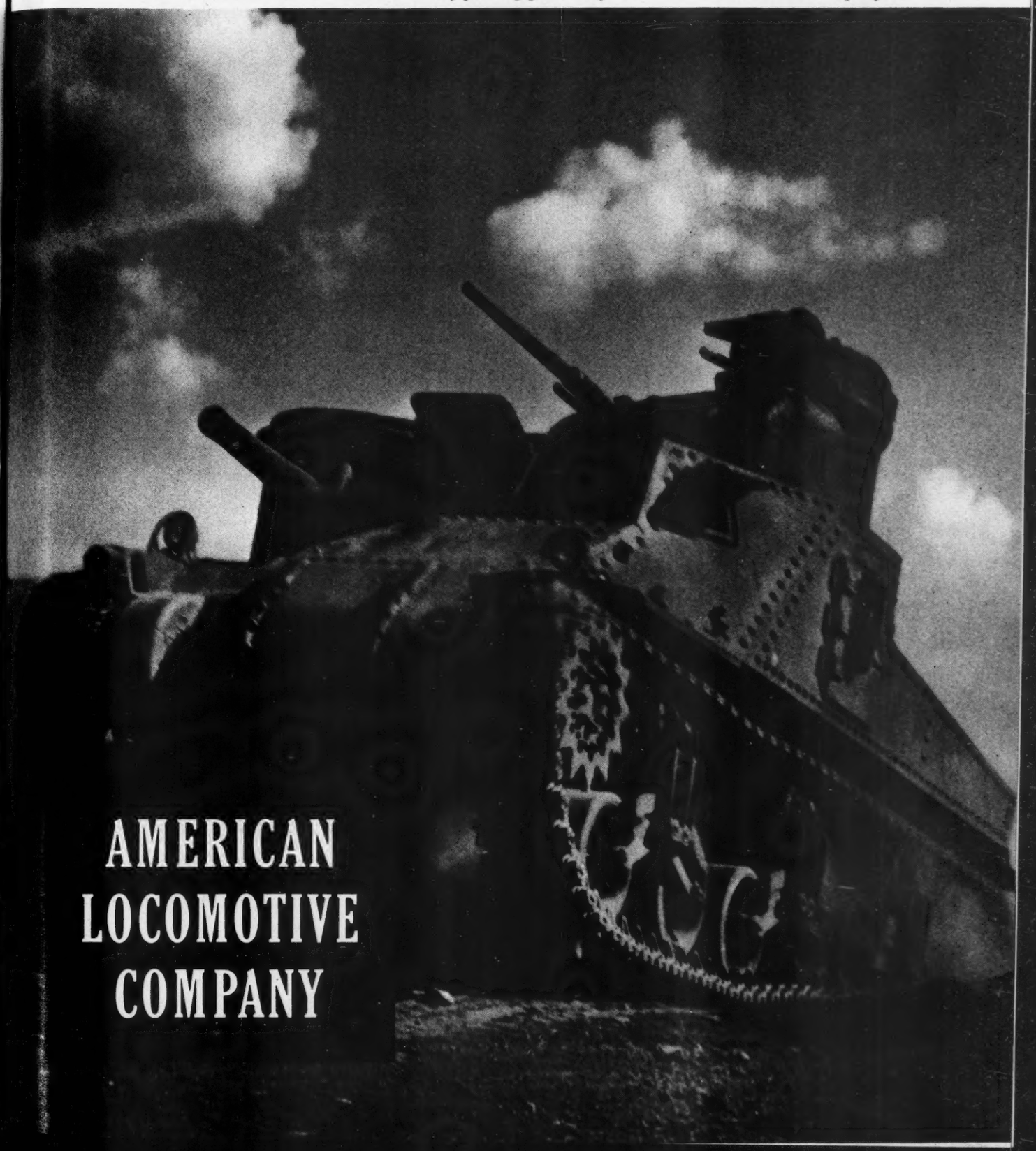
We're rolling our own

We are in production on the M-3 medium tank. We got into line production on this tank first. We were the first to deliver a finished M-3 tank. We are turning them out in a day-after-day schedule. And we are speeding up.

Quite a job, considering that we started less than a year ago without even a blueprint.

We were able to do it because we have the men and the equipment, the skill, the resourcefulness... and 100 years of engineering know-how.

New M-3 medium tank on the Schenectady proving grounds of the American Locomotive Company



AMERICAN
LOCOMOTIVE
COMPANY

transportation assistant. **J. L. Barngrove, Jr.**, research assistant, has been appointed superintendent of car service.

Stanley Frederick Dingle, whose promotion to superintendent on the Canadian National, with headquarters at Dauphin,

Stanley Frederick Dingle

Man., was reported in the *Railway Age* of September 20, was born at Ft. Hancock, N. J., on November 12, 1901, and attended the University of Manitoba, Winnipeg, Man. He entered railway service on June 29, 1920, as a stenographer in the engineering department of the Grand Trunk Pacific (now part of the Canadian National) at Winnipeg and on September 16, 1921, he was promoted to secretary. Two years later he was appointed secretary to the assistant general manager and on August 1, 1925, he became secretary to the general superintendent of transportation. Mr. Dingle was promoted to chief clerk to the general superintendent of transportation at Winnipeg on February 16, 1930, and on March 1, 1939, he was advanced to assistant superintendent at Dauphin, the position he held until his recent promotion.

G. A. Stokes, whose appointment as general superintendent of the Northern Ontario district of the Canadian National, with headquarters at North Bay, Ont., was

G. A. Stokes

announced in the *Railway Age* of September 20, was born at Nassagaweya, Ont. He entered railway service as an operator on the Canadian National at Owen Sound, Ont., serving in a similar capacity at Listowel, Ont. In 1900 he was appointed agent at Southampton, Ont., and subsequently at Harriston, Ont., Wingham, Wiarton and Brantford. Mr. Stokes was appointed despatcher at Stratford, Ont., in 1907, and in 1910 went to Toronto, Ont., where he served successively as yardmaster, general yardmaster and division agent. He was appointed superintendent of terminals at Port Huron, Mich., in 1915, and, in 1918, returned to Toronto as superintendent of terminals. In 1928, Mr. Stokes was transferred to Belleville, Ont., and to London, Ont., in 1938, where he remained until his recent appointment.

TRAFFIC

Effective October 1, **G. C. Hay,** traffic agent for the Chicago Great Western at Cincinnati, Ohio, will be promoted to general agent at Indianapolis, Ind., a newly created position.

Charles D. Chancellor, whose appointment as assistant freight traffic manager of the Central of Georgia at Savannah, Ga., was reported in *Railway Age* of September 6, was born at Okolona, Miss., on Decem-

Charles D. Chancellor

ber 11, 1883. Mr. Chancellor entered railroad service in November, 1897, as mail clerk with the Central of Georgia. In 1904 he served for six months with the Seaboard Air Line, returning to the Central of Georgia that same year. From January 1, 1921, to March 30, 1931, Mr. Chancellor was assistant general freight agent, becoming general freight agent on the latter date, the position he held until his recent promotion.

Van E. Williams, industrial agent for the Northern Pacific at Seattle, Wash., has been promoted to western industrial agent, a newly created position, with the same headquarters.

Effective October 1, **J. H. Gooch,** commercial agent for the Louisville & Nashville at Little Rock, Ark., has been promoted to general agent at Washington, D. C., a newly created position.

Mark W. Thomas, whose appointment as general freight agent of the Central of Georgia at Savannah, Ga., was reported in the *Railway Age* of September 6, entered the service of the Central of Georgia in 1910 as chief clerk to the division freight agent at Atlanta, Ga. Mr. Thomas was appointed rate clerk in the general offices at Savannah on February 14, 1912, and has

Mark W. Thomas

remained there since that time except for a period of two years service with the Pennsylvania at Atlanta. He was appointed assistant general freight agent on March 20, 1930, the position he held until his recent promotion.

Floyd Sutterfield has been appointed general eastern agent for the Missouri & Arkansas at Washington, D. C., succeeding **S. E. Mullikin,** whose appointment as general agent, freight department, for the Denver & Rio Grande Western at Washington, D. C., was reported in the *Railway Age* of August 30.

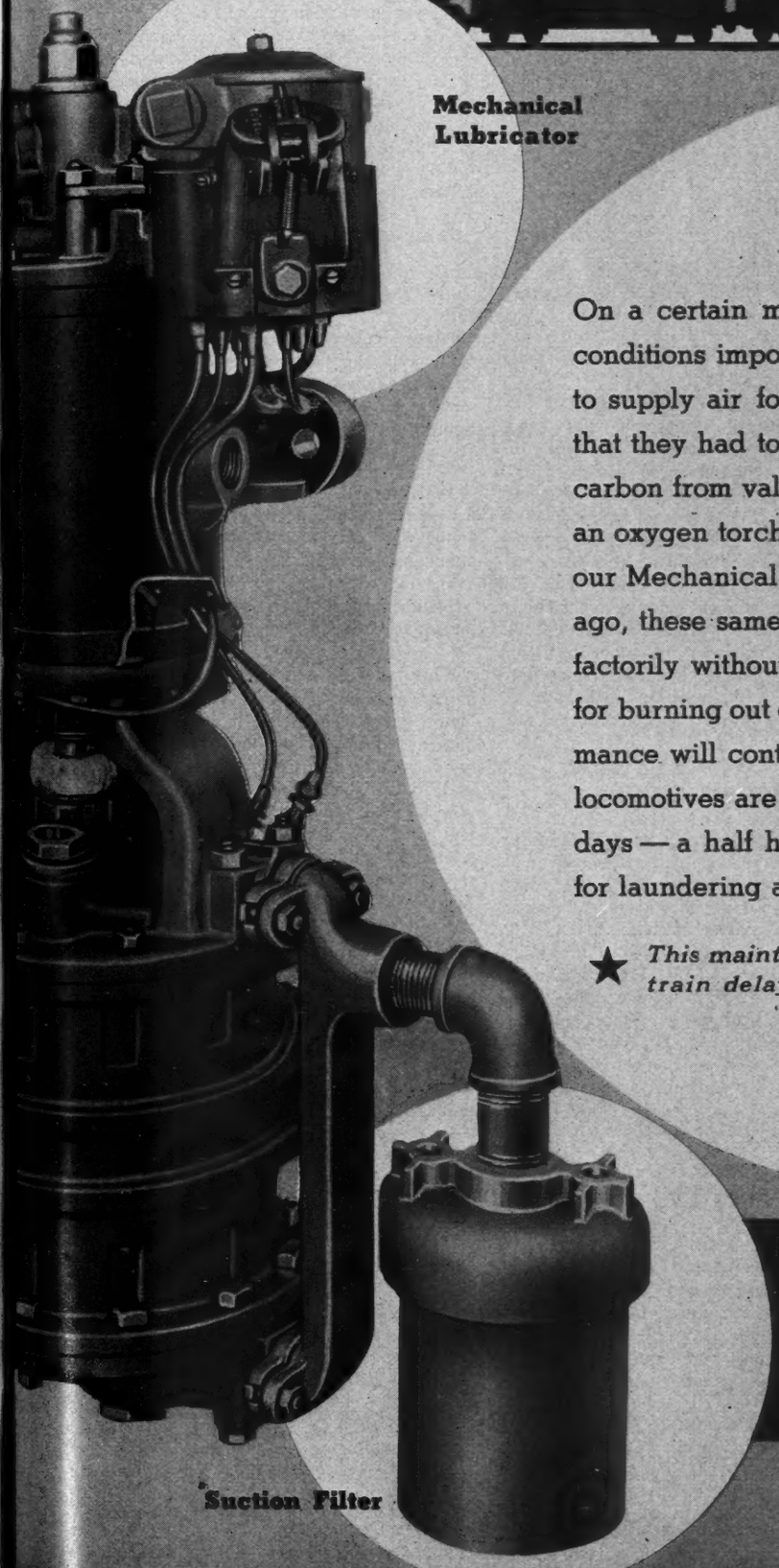
Allen W. Sanders, whose appointment as general freight agent of the Central of Georgia at Savannah, Ga., was reported in the *Railway Age* of September 6, entered the service of the Central of Georgia on May 25, 1902, in the general freight office at Savannah. Six years later he went with the Virginia Lines Tariff Bureau at Richmond, Va., but returned to the

Allen W. Sanders

Central of Georgia after five months. On December 9, 1911, he went with the Carolina, Clinchfield & Ohio (now Clinchfield) at Johnson City, Tenn. On January 16,

Continued on next left-hand page

18 Months instead of 60 Days Between *Compressor Launderings* ★



Mechanical Lubricator

Suction Filter

On a certain mountainous western railroad, operating conditions impose such severe service on compressors, to supply air for braking and many auxiliary devices, that they had to be laundered every 60 days to remove carbon from valves and passages. Oftentimes the use of an oxygen torch was required • Since the installation of our Mechanical Lubricator and Suction Filter 18 months ago, these same compressors have been operating satisfactorily without being once removed for laundering or for burning out carbon. Unquestionably this good performance will continue for many more months — until the locomotives are shopped • Filters are cleaned every 60 days — a half hour job as compared to six hours work for laundering at the same intervals. » » » » » »

★ *This maintenance of vital air supply helps to reduce train delays and increase locomotive availability.*

WESTINGHOUSE AIR BRAKE CO.

WILMERDING, PENNSYLVANIA

1919, Mr. Sanders returned to the Central of Georgia, becoming assistant general freight agent on March 20, 1930, the position he held until his recent promotion.

L. P. Messmore, division passenger agent on the Pere Marquette at Grand Rapids, Mich., has been promoted to assistant general passenger agent at Milwaukee, Wis. **D. R. Rathsack,** agent at Manitowoc, Wis., has been promoted to general agent, passenger department, at Ludington, Mich. **R. W. Ohlman,** traveling passenger agent at Chicago, has been promoted to division passenger agent at Grand Rapids, succeeding Mr. Messmore. **Harold E. Hay,** northwestern passenger agent at Milwaukee, Wis., has been appointed district passenger agent, with headquarters at Chicago.

John A. Ferguson, whose promotion to general coal freight agent of the Erie, with headquarters at Cleveland, Ohio, was reported in the *Railway Age* of September 20, was born at Pittsburgh, Pa., on April 7, 1891, and graduated from Curry College (Pittsburgh) on February 1, 1908. He entered railway service on February 27, 1908, as a stenographer on the Erie at Pittsburgh, subsequently serving as rate clerk and chief clerk at that point. On May 1, 1918, he was transferred to Youngstown, Ohio, and in August, 1918, he entered the United States Navy as a chief

John A. Ferguson

yeoman. When he returned from naval service on March 13, 1919, he became traffic manager of the Atlantic Refining Company at Pittsburgh, and on March 23, 1920, he returned to the Erie as chief clerk at Pittsburgh. On November 16, 1923, he was promoted to commercial agent and on October 16, 1928, he was advanced to coal freight agent at Pittsburgh. Mr. Ferguson was appointed division freight agent at Scranton, Pa., on August 1, 1930, and on September 1, 1931, he was appointed coal freight agent, with headquarters at Cleveland, the position he held until his recent promotion.

ENGINEERING & SIGNALING

H. D. Stowe, supervisor of track of the Delmarva division of the Pennsylvania, with headquarters at Clayton, Del., has been appointed assistant engineer in the office of the chief engineer maintenance of way, New York Zone.

Herbert E. Brink, chief draftsman of the New York, New Haven & Hartford, with headquarters at New Haven, Conn., has been appointed construction engineer,

Herbert E. Brink

with the same headquarters. **Harold St. Clair McIntosh,** draftsman, has been appointed chief draftsman in the office of engineer of structures and design. Mr. Brink was born on May 19, 1882, at Montague, N. J., and entered railroad service as draftsman in the engineering department of the New Haven at New York on September 10, 1908. In June, 1912, he was appointed resident engineer, becoming assistant engineer in March, 1916, and general assistant engineer on June 16, 1926. He was appointed chief draftsman on March 1, 1933, the position he held until his recent appointment as construction engineer.

MECHANICAL

H. C. Wright, master mechanic of the Williamsport division of the Pennsylvania, with headquarters at Renovo, Pa., has been transferred to the Middle division. **T. L. Preun,** master mechanic at Buffalo, N. Y., has been transferred to the Williamsport division. **J. F. Hunt,** assistant master mechanic of the Philadelphia division, has been promoted to master mechanic at Buffalo. **H. D. Ahn,** assistant engineer motive power in the office of the chief of motive power, has been appointed assistant master mechanic of the Philadelphia division.

PURCHASES AND STORES

W. J. Sidey, whose promotion to general storekeeper of the Lehigh Valley at Sayre, Pa., was reported in the *Railway Age* of August 2, entered railroad service immediately after leaving school. Mr. Sidey served part-time apprenticeships in the car and locomotive shops, drawing room, track section, car service department and accounting department of the Buffalo, Rochester & Pittsburgh (now Baltimore & Ohio) at Du Bois, Pa. He then worked for several wholesale concerns in Rochester, N. Y., in their shipping, billing and stock departments. He later returned to the Buffalo, Rochester & Pittsburgh in its material supply service, where he served in various capacities. He then worked for six years as storekeeper in charge of material stocks with the General Electric Company in one of its subsidiary plants at Wellsville, N. Y. Mr. Sidey returned to the railroad field in 1922 with the Lehigh Valley as division storekeeper at Jersey City, N. J., then serving successively as traveling storekeeper at Wilkes-Barre, Pa.; division storekeeper at Coxton, Pa.; and supervisor of scrap and reclamation at Sayre. He was appointed acting general storekeeper on February 1, 1941, becoming general storekeeper in June, 1941. Mr. Sidey has served on committees of the Purchases and Stores division of the Association of American Railroads for the past 12 years, both as a member and as chairman.

OBITUARY

Alan Rogers, former supervisor of public relations for the New York Central System, Chicago, who retired from active service on September 30, 1939, died on September 19 in Cincinnati, Ohio, at the age of 68 years.

William W. Broughton, general traffic manager of the Great Northern from January 1, 1908, to March 1, 1911, and later vice-president of the Pittsburg Coal Company, Minneapolis, Minn., died on September 10 at the Good Samaritan hospital, Los Angeles, Cal.

Thomas Addison Busby, retired managing editor of the *Railway Age,* and for many years prominent in Ohio politics, died at his home in South Vienna, Ohio, on September 23. Mr. Busby was born in 1858, and joined the staff of the *Railway Age* in 1883, serving as an associate editor and later as managing editor. He retired from that publication in 1908, and moved to South Vienna where he served as mayor from 1909 to 1917, resigning in the latter year upon his election as state senator for the 11th Ohio district. He represented this district in the 82nd and 83rd general assemblies.

Joseph A. Parant, assistant to the chief engineer of the Boston & Maine, with headquarters at Boston, Mass., died on September 22 at Wolfeboro, N. H., following a sudden illness. Mr. Parant, who was 53 years of age, was born at Lawrence, Mass. Following a public school education, he attended the Massachusetts Institute of Technology. Mr. Parant first entered the service of the Boston & Maine in June, 1903, as a water boy. Subsequently, he was advanced through various positions in the engineering department, being appointed engineer of standards on April 1, 1927. On November 1 of the following year, he became principal assistant engineer, and on February 1, 1939, he was appointed assistant to the chief engineer, the position he was holding at the time of his death.

Freight Operating Statistics appear on next left-hand page

Insures Maximum Economies

IT takes something more than the service built into ordinary materials to combat the severe actions of hot gases, high temperatures and heavy frictional wear developed inside the cylinders of Diesel engines.

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Freight Operating Statistics of Large Steam Railways—Selected Items

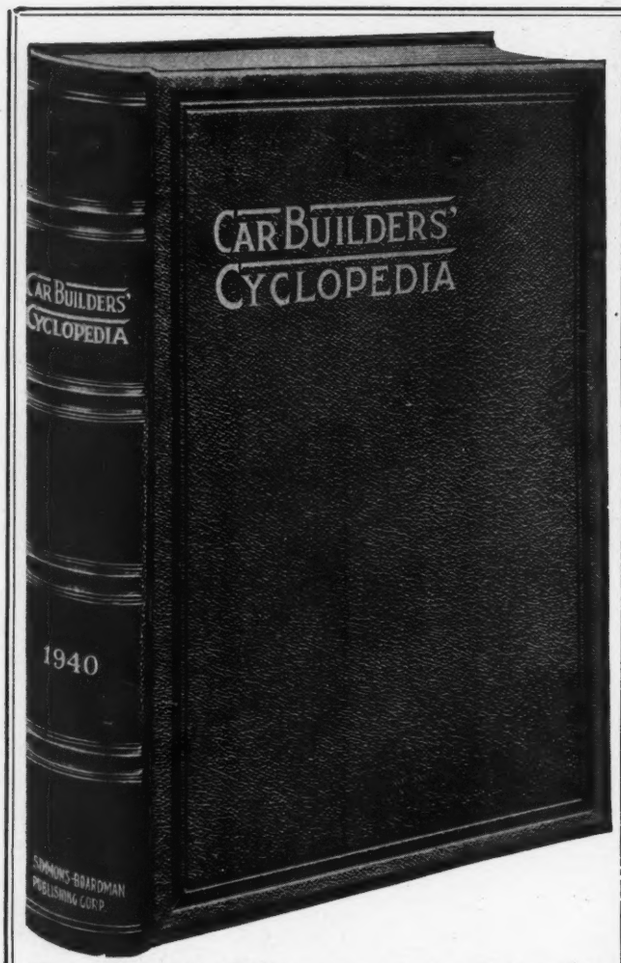
Region, road, and year	Miles of road operated	Train-miles	Locomotive-miles Principal and helper	Locomotive-miles Light	Car-miles Loaded (*thousands*)	Car-miles Per cent loaded	Ton-miles (*thousands*) Gross excluding locomotives and tenders	Ton-miles (*thousands*) Net revenue and non-revenue	Number of road locomotives on line Serviceable Not stored	Serviceable Stored	Unserviceable	Per cent unserviceable
New England Region:												
Boston & Albany 1941	362	169,797	176,076	12,628	3,755	64.3	229,176	87,991	64	2	20	23.3
1940	362	133,435	138,268	9,481	2,851	63.6	169,735	60,929	56	7	22	25.9
Boston & Maine 1941	1,894	338,298	385,785	34,490	12,637	69.5	724,767	286,802	135	3	27	16.4
1940	1,892	277,348	312,775	25,292	9,382	67.2	540,637	204,653	128	1	46	26.3
N. Y., New Hav. & Hartf.† 1941	1,829	450,403	558,254	41,630	16,513	67.0	927,809	357,945	199	..	55	19.9
1940	1,841	342,841	428,978	28,428	11,778	64.4	672,564	252,262	187	8	59	25.0
Great Lakes Region:												
Delaware & Hudson 1941	849	311,973	369,004	41,370	11,606	65.2	770,822	369,182	133	32	80	32.7
1940	846	246,092	318,513	34,034	8,113	61.5	525,976	244,470	128	39	81	32.7
Del., Lack. & Western 1941	983	392,129	452,001	62,712	15,504	71.0	925,884	400,625	143	3	63	30.1
1940	983	339,149	381,869	49,215	11,818	66.2	712,099	283,491	135	9	58	28.7
Erie (incl. Chi. & Erie)‡ 1941	2,257	850,155	898,076	51,755	37,424	67.0	2,345,257	927,909	271	10	145	34.0
1940	2,268	690,235	728,716	43,231	29,710	63.6	1,911,012	724,367	227	28	169	39.9
Grand Trunk Western 1941	1,023	279,052	284,596	1,828	8,750	63.3	543,147	197,787	72	1	18	19.8
1940	1,023	204,752	206,210	1,060	5,878	61.7	366,199	129,774	67	11	20	20.4
Lehigh Valley 1941	1,251	397,025	432,063	68,917	16,197	68.0	1,036,826	467,837	131	16	36	19.7
1940	1,252	317,565	344,681	47,726	12,013	64.0	782,645	334,015	124	5	84	39.4
New York Central 1941	10,521	3,190,515	3,403,441	204,787	114,636	62.2	7,748,789	3,386,831	1,039	93	250	18.1
1940	10,563	2,582,867	2,756,119	170,076	84,679	59.3	5,909,816	2,525,183	883	146	331	24.3
N. Y., Chicago & St. Louis 1941	1,672	625,910	639,683	8,222	24,215	67.4	1,483,243	605,822	149	..	19	11.3
1940	1,672	499,635	506,715	6,061	17,772	62.0	1,120,179	415,913	122	15	29	17.5
Pere Marquette 1941	2,068	402,630	415,201	8,523	11,432	66.7	717,564	298,447	129	..	25	16.2
1940	2,080	325,409	331,326	7,096	8,267	59.8	554,848	215,028	109	8	43	26.9
Pittsburgh & Lake Erie 1941	232	105,774	107,850	83	4,465	64.6	378,983	222,207	44	..	14	24.1
1940	233	84,117	87,428	..	3,497	60.9	307,686	177,413	37	9	19	29.2
Wabash* 1941	2,397	674,373	691,307	13,426	23,164	69.6	1,383,009	547,626	146	18	95	36.7
1940	2,397	550,631	565,075	12,303	17,119	63.8	1,064,113	392,276	131	14	121	45.5
Central Eastern Region:												
Baltimore & Ohio 1941	6,245	1,961,375	2,461,515	261,030	65,420	64.2	4,521,667	2,122,108	838	89	212	18.6
1940	6,261	1,562,935	1,938,821	204,672	49,823	60.5	3,557,050	1,611,932	725	99	384	31.8
Central of New Jersey† 1941	680	219,011	245,205	45,345	6,884	61.6	486,478	237,603	88	8	48	33.3
1940	679	163,895	182,882	31,880	5,136	59.6	367,538	174,243	74	8	63	43.4
Chicago & Eastern Illinois 1941	925	179,487	181,627	3,130	5,026	68.7	307,829	135,918	56	11	24	26.4
1940	925	171,953	171,955	3,321	4,184	64.8	264,714	111,964	56	3	31	34.4
Elgin, Joliet & Eastern 1941	390	129,469	130,963	1,807	3,585	60.4	280,095	141,584	65	1	11	14.3
1940	390	106,526	108,214	1,474	2,700	57.7	213,640	103,300	55	..	21	27.6
Long Island 1941	375	30,046	31,394	19,870	297	51.0	22,636	8,517	35	7	6	12.5
1940	375	26,299	27,462	17,216	254	50.7	19,360	7,214	34	9	5	10.4
Pennsylvania System 1941	9,960	4,095,630	4,836,482	586,789	155,566	63.2	10,846,908	5,046,787	1,695	70	394	18.2
1940	9,966	3,072,224	3,705,047	403,667	114,066	59.9	8,158,490	3,642,840	1,321	155	767	34.2
Reading 1941	1,430	512,281	566,688	67,252	15,562	63.4	1,112,040	562,595	258	12	71	20.8
1940	1,442	409,056	452,100	52,233	11,978	60.6	880,261	426,124	212	14	146	39.2
Pocahontas Region:												
Chesapeake & Ohio 1941	3,053	1,003,837	1,061,923	49,417	47,423	57.8	3,991,094	2,216,663	408	25	62	12.5
1940	3,044	905,318	953,014	42,278	41,747	55.8	3,558,061	1,947,965	372	47	84	16.7
Norfolk & Western 1941	2,169	778,865	817,928	46,109	35,547	58.6	3,012,095	1,610,433	301	16	26	7.6
1940	2,169	676,818	705,042	35,528	30,843	56.9	2,623,910	1,380,938	279	45	33	9.2
Southern Region:												
Atlantic Coast Line 1941	5,071	686,142	693,523	9,793	15,091	63.3	947,466	377,516	277	20	39	11.6
1940	5,074	571,207	574,792	8,633	11,410	63.4	684,685	252,352	266	35	43	12.5
Central of Georgia† 1941	1,831	322,679	325,908	5,357	7,026	68.2	419,707	167,469	101	..	16	13.7
1940	1,831	285,525	288,263	4,940	5,732	66.8	333,366	121,700	96	..	24	20.0
Gulf, Mobile & Ohio 1941	1,962	263,071	302,962	3,075	8,706	69.1	522,693	224,778	89	5	13	12.1
1940	1,993	231,395	249,489	1,134	6,384	69.7	376,000	164,351	73	26	10	9.2
Illinois Central (incl. Y. & M. V. 1941	6,521	1,511,641	1,518,372	27,272	46,778	62.4	3,109,702	1,333,755	597	30	134	17.6
1940	6,557	1,202,993	1,207,914	22,950	33,965	60.0	2,232,804	896,016	576	73	160	19.8
Louisville & Nashville 1941	4,794	1,345,286	1,450,892	38,868	34,417	61.1	2,451,319	1,202,921	342	52	63	13.8
1940	4,862	1,125,363	1,217,977	32,014	27,707	58.7	1,993,419	946,961	348	46	92	18.9
Seaboard Air Line* 1941	4,298	698,850	730,220	4,363	16,580	63.1	1,065,054	442,293	259	..	44	14.5
1940	4,301	523,444	541,547	2,818	12,259	61.8	760,118	292,800	225	27	52	17.1
Southern 1941	6,521	1,763,632	1,791,133	26,262	40,482	66.0	2,421,185	993,481	555	1	102	15.5
1940	6,548	1,374,890	1,398,875	21,103	30,902	64.7	1,839,893	726,998	494	1	148	23.0
Northwestern Region:												
Chicago & North Western† 1941	8,305	1,013,322	1,053,022	23,236	33,280	63.8	2,169,729	865,280	327	13	219	39.2
1940	8,319	848,202	883,646	16,317	25,648	61.2	1,688,426	628,376	298	47	263	43.3
Chicago Great Western 1941	1,447	276,246	280,839	5,761	8,634	64.6	539,892	204,706	67	4	10	12.3
1940	1,447	241,144	242,367	5,298	6,901	61.2	438,576	156,202	62	6	21	23.6
Chi., Milw., St. P. & Pac.† 1941	10,846	1,517,801	1,581,051	58,310	47,622	63.1	3,147,636	1,345,704	469	25	107	17.8
1940	10,874	1,210,502	1,259,965	57,648	35,673	61.2	2,342,656	946,866	418	72	122	19.9
Chi., St. P., Minn. & Omaha 1941	1,618	238,695	252,218	12,966	6,218	66.8	388,959	158,098	103	10	18	13.7
1940	1,619	213,343	220,781	9,964	4,900	63.3	312,541	117,265	97	27	14	10.1
Great Northern 1941	7,977	1,179,897	1,179,798	37,501	44,654	60.0	3,267,003	1,513,445	362	24	120	23.7
1940	7,973	857,514	852,324	26,915	29,749	58.6	2,251,008	1,008,791	324	55	144	27.5
Minneap., St. P. & S. St. M.† 1941	4,251	474,297	483,710	6,684	12,919	65.7	821,965	363,377	122	..	10	7.6
1940	4,250	391,525	395,648	4,187	9,462	62.7	590,920	248,469	114	..	11	8.8
Northern Pacific 1941	6,414	872,349	936,873	58,440	32,039	67.9	2,047,642	906,047	340	19	59	14.1
1940	6,423	682,314	722,267	40,789	22,807	66.0	1,424,574	573,972	305	48	87	19.8
Central Western Region:												
Alton 1941	915	229,633	248,665	1,458	5,505	65.0	354,288	146,295	68	3	7	9.0
1940	914	213,858	229,911	1,165	4,725	63.3	313,312	124,144	66	6	10	12.2
Atch., Top. & S. Fe (incl. G. C. & S. F. & S. F.) 1941	13,431	2,770,537	3,036,828	169,189	83,192	61.8	5,584,362	2,011,961	729	25	124	14.1
1940	13,414	2,036,937	2,182,972	106,671	57,729	59.7	3,959,635	1,355,127	629	49	159	19.0
Chicago, Burl. & Quincy 1941	8,923	1,378,243	1,424,416	51,469	44,122	62.8	2,950,552	1,261,197	433	7	93	17.4
1940	8,924	1,091,893	1,111,175	45,873	32,150	63.4	2,078,400	849,615	406	48	92	16.8
Chi., Rock I. & Pac.† 1941	7,911	1,286,226	1,324,820	11,954	34,598	63.1	2,233,915	903,272	356	18	116	23.7
1940	7,876	1,117,805	1,148,125	12,027	27,338	59.1	1,816,681	704,436	326	43	170	31.5
Denver & Rio Gr. Western† 1941	2,547	339,508	387,615	51,523	10,260	67.1	659,423	279,403	144	12	28	15.2
1940	2,554	272,696	303,784	32,913	7,969	65.2	519,089	208,465	123	42	21	11.3
Southern Pac.—Pac. Lines 1941	8,490	2,063,026	2,270,876	313,424	74,242	62.0	4,904,507	1,747,960	755	10	85	10.0
1940	8,535	1,528,926	1,648,834	189,008	51,601	60.9	3,417,255	1,159,065	619	24	132	17.0
Union Pacific 1941	9,872	2,644,537	2,746,416	166,371	77,651	63.5	4,936,897	1,856,649	683	16	135	16.2
1940	9,898	1,932,805	2,002,480	113,191	59,060	59.0	3,878,376	1,316,961	549	44	236	28.5
Southwestern Region:												
Mo.-Kansas-Texas Lines 1941	3,281	463,897	468,443	8,353	12,144	65.4	743,813	292,913	85	..	95	52.8
1940	3,281	406,660	409,582	6,004	9,327	60.8	592,933	221,012	84	..	95	53.1
Missouri Pacific† 1941	7,110	1,307,205	1,343,585	25,203	40,155	67.1	2,585,568	1,110,384	427	10	65	12.9
1940	7,120	1,098,785	1,136,161	22,803	30,014	62.6	1,972,989	790,732	373	72	75	14.4
Texas & Pacific 1941	1,891	309,765	309,765	1,636	10,147	66.4	636,596	234,107	83	21	80	43.5
1940	1,882	247,246	247,246	1,428	7,593	63.7	471,171	168,209	64	27	98	51.9
St. Louis-San Francisco† 1941	4,735	803,221	823,587	13,930	18,768	64.0	1,196,987	493,134	271	18	34	10.5
1940	4,778	636,110	646,184	8,397	14,215	60.2	934,205	376,053	266	59	32	9.0
St. Louis-San Fran. & Texas 1941	159	30,081	30,805	38	509	59.7	35,293	12,924	11	2	..	...
1940	159	23,355	23,355	..	361	55.7	24,723	8,934	9	1	1	9.1
St. Louis Southw. Lines† 1941	1,600	334,594	338,708	4,301	10,299	72.9	592,197	248,009	85	12	23	19.2
1940	1,633	243,678	244,631	3,102	6,530	68.2	375,732	126,445	73	22	17	15.2
Texas & New Orleans 1941	4,415	754,192	754,440	5,481	18,654	63.1	1,241,701	497,359	221	13	30	11.4
1940	4,415	569,128	569,129	4,555	12,717	63.1	823,872	316,403	199	12	49	18.8

* Report of receivers.
† Report of trustee or trustees.
‡ Under trusteeship, Erie R. R. only.

for the Month of July, 1941, Compared with July, 1940

Region, road, and year	Number of freight cars on line: Home	Foreign	Total	Per cent unserviceable	Gross ton-miles per train-hour, excluding locomotives and tenders	Gross ton-miles per train-mile excluding locomotives and tenders	Net ton-miles per train-mile	Net ton-miles per loaded car-mile	Net ton-miles per car-day	Car-miles per car-day	Net ton-miles per mile of road per day	Pounds of coal per 1,000 gross ton-miles, including locomotives and tenders	Locomotive miles per locomotive-day
New England Region:													
Boston & Albany 1941	691	5,642	6,333	1.6	23,436	1,362	523	23.4	449	29.8	7,841	133	77.0
1940	875	4,444	5,319	1.8	21,364	1,288	462	21.4	357	26.2	5,429	147	59.7
Boston & Maine 1941	3,497	10,540	14,037	2.6	29,450	2,151	851	22.7	662	42.0	4,885	88	87.5
1940	4,906	6,664	11,570	5.8	27,823	1,955	740	21.8	534	36.5	3,489	93	66.5
N. Y., New Hav. & Hartf.† 1941	3,728	18,768	22,496	2.5	29,304	2,089	806	21.7	501	34.5	6,313	95	82.9
1940	7,279	10,495	17,774	4.7	29,006	1,994	748	21.4	453	32.8	4,420	99	65.5
Great Lakes Region:													
Delaware & Hudson 1941	5,798	6,111	11,909	4.2	38,684	2,489	1,192	31.8	1,014	48.9	14,027	97	57.3
1940	8,229	3,526	11,755	3.7	32,890	2,149	999	30.1	654	35.3	9,322	109	49.3
Del., Lack. & Western 1941	6,811	10,201	17,012	3.4	40,016	2,391	1,034	25.8	754	41.1	13,147	117	82.9
1940	11,138	5,496	16,634	7.2	37,821	2,123	845	24.0	552	34.7	9,303	118	72.3
Erie (incl. Chi. & Erie)‡.... 1941	11,335	22,562	33,897	2.2	48,202	2,783	1,101	24.8	910	54.8	13,262	84	79.4
1940	14,879	13,451	28,330	3.2	48,425	2,791	1,058	24.4	822	53.0	10,303	85	64.6
Grand Trunk Western 1941	3,823	8,398	12,221	5.4	36,801	1,963	715	22.6	522	36.4	6,237	81	111.8
1940	5,128	5,993	11,121	8.5	35,522	1,797	637	22.1	402	29.5	4,092	87	74.9
Lehigh Valley 1941	6,417	14,398	20,815	1.3	48,969	2,659	1,200	28.9	751	38.2	12,064	99	94.5
1940	9,674	8,537	18,211	1.8	46,795	2,503	1,068	27.8	577	32.4	8,606	99	62.7
New York Central 1941	60,769	79,955	140,724	6.2	40,537	2,455	1,073	29.5	774	42.1	10,384	91	95.3
1940	86,587	57,820	144,407	11.5	38,621	2,307	986	29.8	570	32.2	7,712	92	77.8
N. Y., Chicago & St. Louis.. 1941	3,922	12,655	16,577	2.1	43,951	2,373	969	25.0	1,261	74.8	11,688	79	135.8
1940	6,185	8,920	15,105	3.2	41,765	2,246	834	23.4	921	63.4	8,024	80	107.4
Pere Marquette 1941	5,374	7,920	13,294	2.5	31,039	1,793	746	26.1	696	40.0	4,655	85	97.6
1940	8,939	6,650	15,589	3.4	29,823	1,710	663	26.0	460	29.5	3,335	87	76.8
Pittsburgh & Lake Erie 1941	7,822	9,274	17,096	8.7	47,809	3,599	2,110	49.8	447	13.9	30,896	80	66.3
1940	13,014	5,437	18,451	24.4	50,341	3,658	2,109	50.7	319	10.3	24,562	69	46.0
Wabash* 1941	8,640	13,621	22,261	1.1	41,077	2,079	823	23.6	810	49.2	7,870	95	92.5
1940	12,321	9,691	22,012	6.3	38,882	1,946	717	22.9	582	39.8	5,279	103	73.9
Central Eastern Region:													
Baltimore & Ohio 1941	43,063	37,906	80,968	3.1	31,445	2,344	1,100	32.4	843	40.5	10,962	128	81.8
1940	55,887	27,634	83,521	9.4	31,767	2,310	1,047	32.4	624	31.8	8,305	126	61.3
Central of New Jersey† 1941	5,264	15,037	20,301	3.3	29,532	2,315	1,131	34.5	365	17.2	11,271	118	83.2
1940	7,278	10,271	17,549	14.2	29,719	2,371	1,124	33.9	300	14.8	8,278	118	61.4
Chicago & Eastern Illinois ... 1941	2,610	3,476	6,086	5.0	31,909	1,724	761	27.0	702	37.8	4,740	108	69.1
1940	3,144	3,181	6,325	7.8	29,051	1,542	652	26.8	565	32.6	3,905	117	64.9
Elgin, Joliet & Eastern 1941	9,764	7,898	17,662	4.2	18,226	2,220	1,122	39.5	257	10.8	11,711	105	80.7
1940	9,405	6,097	15,502	3.2	19,159	2,050	991	38.3	225	10.2	8,544	106	64.1
Long Island 1941	73	3,801	3,874	0.4	5,581	774	291	28.7	66	4.5	733	309	48.1
1940	136	3,127	3,263	1.1	5,684	748	279	28.4	78	5.4	621	312	43.7
Pennsylvania System 1941	146,928	93,616	240,544	8.8	37,495	2,724	1,267	32.4	676	33.0	16,345	105	89.6
1940	184,230	60,102	244,332	15.3	39,003	2,716	1,213	31.9	476	24.9	11,791	101	65.8
Reading 1941	16,013	19,141	35,154	8.0	28,969	2,178	1,102	36.2	508	22.2	12,691	128	70.6
1940	23,110	11,493	34,603	17.9	28,060	2,159	1,045	35.6	399	18.5	9,533	127	51.6
Pocahontas Region:													
Chesapeake & Ohio 1941	38,820	16,605	55,425	1.2	58,697	4,030	2,238	46.7	1,303	48.3	23,421	63	79.3
1940	44,986	14,200	59,186	1.9	59,058	3,966	2,171	46.7	1,055	40.5	20,643	64	70.8
Norfolk & Western 1941	31,396	7,191	38,587	1.6	61,879	3,919	2,096	45.3	1,366	51.5	23,951	78	87.9
1940	36,652	5,655	42,307	2.1	60,977	3,931	2,069	44.8	1,049	41.1	20,538	80	73.5
Southern Region:													
Atlantic Coast Line 1941	10,837	7,683	18,520	9.6	24,694	1,387	553	25.0	637	40.2	2,401	107	71.8
1940	13,437	5,362	18,799	19.2	22,598	1,203	444	22.1	424	30.3	1,604	108	57.9
Central of Georgia† 1941	3,617	5,194	8,811	0.6	24,657	1,307	522	23.8	581	35.7	2,950	116	98.7
1940	4,574	2,898	7,472	2.1	22,932	1,176	429	21.2	485	34.2	2,144	116	85.7
Gulf, Mobile & Ohio 1941	2,705	5,259	7,964	2.4	36,511	1,991	856	25.8	989	55.5	3,696	100	96.0
1940	3,333	3,433	6,766	4.4	31,399	1,630	712	25.7	792	44.1	2,660	105	79.0
Illinois Central (incl. Y. 1941	24,974	23,716	48,690	1.3	33,991	2,087	895	28.5	914	51.4	6,598	110	72.7
& M. V.) 1940	30,092	12,957	43,049	4.0	31,398	1,876	753	26.4	665	42.0	4,408	114	52.7
Louisville & Nashville 1941	30,236	13,317	43,553	2.4	29,033	1,825	896	35.0	916	42.9	8,094	109	111.2
1940	37,434	9,859	47,293	11.7	29,039	1,773	842	34.2	643	32.1	6,283	112	86.0
Seaboard Air Line* 1941	9,803	9,154	18,957	2.1	26,961	1,546	642	26.7	757	44.9	3,320	117	86.9
1940	10,923	5,750	16,673	3.7	26,158	1,470	566	23.9	558	37.8	2,196	118	63.6
Southern 1941	18,564	22,833	41,397	5.7	23,692	1,383	568	24.5	765	47.3	4,915	134	93.9
1940	22,700	18,254	40,954	9.1	24,132	1,346	532	23.5	573	37.6	3,581	130	74.6
Northwestern Region:													
Chicago & North Western†.. 1941	26,810	24,858	51,668	6.5	32,792	2,206	880	26.0	512	30.9	3,361	105	67.1
1940	33,083	20,696	53,779	10.1	31,020	2,040	759	24.5	375	25.0	2,437	104	52.7
Chicago Great Western 1941	1,710	4,831	6,541	1.3	36,055	1,957	742	23.7	1,049	68.5	4,564	104	121.6
1940	2,386	3,576	5,962	1.4	33,667	1,823	649	22.6	868	62.7	3,482	109	98.1
Chi., Milw., St. P. & Pac.†.. 1941	36,466	27,439	63,905	1.2	33,975	2,088	893	28.3	674	37.8	4,002	106	96.1
1940	42,749	18,628	61,377	3.0	32,607	1,948	787	26.5	499	30.7	2,809	107	76.2
Chi., St. P., Minn. & Omaha. 1941	1,726	7,787	9,513	5.5	21,994	1,660	675	25.4	580	34.2	3,152	97	69.8
1940	3,092	5,694	8,786	7.1	20,109	1,477	554	23.9	432	28.5	2,336	101	58.5
Great Northern 1941	27,985	13,459	41,444	3.1	43,401	2,781	1,288	33.9	1,211	59.5	6,120	82	83.4
1940	33,769	10,091	43,860	5.5	41,964	2,639	1,183	33.9	749	37.7	4,081	86	58.7
Minneap., St. P. & S. St. M.†. 1941	10,183	5,985	16,168	3.0	29,158	1,745	771	28.1	730	39.5	2,757	85	124.5
1940	12,025	4,284	16,309	4.0	25,134	1,513	636	26.3	487	29.6	1,886	92	103.3
Northern Pacific 1941	24,903	8,505	33,408	5.6	38,818	2,357	1,043	28.3	890	46.3	4,557	112	82.3
1940	28,851	6,620	35,471	7.3	35,921	2,099	846	25.2	524	31.6	2,883	119	60.8
Central Western Region:													
Alton 1941	967	6,158	7,125	4.1	37,376	1,559	644	26.6	643	37.3	5,158	127	110.3
1940	1,528	5,874	7,402	6.0	37,149	1,476	585	26.3	554	33.3	4,381	116	95.5
Atch., Top. & S. Fe (incl. 1941	59,761	24,675	84,436	4.7	38,690	2,023	729	24.2	746	49.9	4,832	107	124.7
G. C. & S. F. & P. & S. F.). 1940	62,098	12,255	74,353	10.0	38,310	1,951	668	23.5	578	41.2	3,259	106	92.7
Chicago, Burl. & Quincy 1941	23,318	25,635	48,953	1.8	35,922	2,150	919	28.6	893	49.8	4,559	96	94.3
1940	27,635	15,815	43,450	5.6	32,896	1,912	781	26.4	633	37.8	3,071	100	73.4
Chi., Rock I. & Pac.† 1941	16,245	15,255	31,500	3.6	32,023	1,741	704	26.1	873	53.0	3,683	99	93.8
1940	19,266	11,629	30,895	5.8	30,226	1,630	632	25.8	694	45.6	2,885	104	73.7
Denver & Rio Gr. Western†.. 1941	9,881	5,271	15,152	3.1	33,587	1,951	827	27.2	623	34.1	3,539	145	82.0
1940	11,696	5,244	16,940	3.4	32,298	1,910	767	26.2	419	24.5	2,633	145	62.8
Southern Pac.—Pac. Lines... 1941	28,044	36,655	64,699	2.7	35,708	2,396	854	23.5	891	61.0	6,641	96	108.8
1940	28,230	29,125	57,355	4.8	37,521	2,255	765	22.5	651	47.6	4,381	93	82.0
Union Pacific 1941	33,762	28,392	62,154	5.9	41,568	1,884	709	23.9	982	64.7	6,067	115	116.6
1940	32,623	22,597	55,220	6.7	44,399	2,020	686	22.3	796	60.5	4,292	112	85.3
Southwestern Region:													
Mo.-Kansas-Texas Lines 1941	5,196	5,941	11,137	11.9	30,534	1,606	632	24.1	840	53.3	2,880	78	91.7
1940	5,283	3,234	8,517	7.1	28,652	1,462	545	23.7	799	55.5	2,173	81	80.7
Missouri Pacific† 1941	14,313	26,013	40,326	1.6	34,934	1,990	855	27.7	883	47.6	5,038	104	95.9
1940	18,075	16,484	34,559	2.6	31,847	1,805	723	26.3	738	44.8	3,583	109	77.3
Texas & Pacific 1941	2,361	4,942	7,303	1.3	44,058	2,061	758	23.1	996	65.0	3,994	79	57.4
1940	2,933	3,303	6,236	2.2	37,924	1,908	681	22.2	880	62.4	2,883	79	45.5
St. Louis-San Francisco† 1941	13,713	7,596	21,309	3.0	30,621	1,497	617	26.3	647	41.3	3,360	109	89.3
1940	16,893	4,797	21,690	2.2	28,817	1,472	592	26.5	549	34.5	2,539	109	63.2
St. Louis-San Fran. & Texas. 1941	....	479	479	1.5	25,030	1,176	430	25.4	788	52.0	2,622	114	71.7
1940	....	427	427	3.0	21,131	1,060	383	24.7	570	41.3	1,813	114	63.7
St. Louis Southw. Lines†.... 1941	1,486	3,441	4,927	1.6	36,703	1,775	743	24.1	1,535	87.4	5,000	77	96.5
1940	2,469	2,585	5,054	2.7	32,486	1,544	520	19.4	789	59.7	2,498	86	75.7
Texas & New Orleans 1941	4,446	11,743	16,189	3.1	32,717	1,659	665	26.7	966	57.4	3,634	81	97.5
1940	5,711	8,538	14,249	5.3	28,151	1,458	560	24.9	682	43.4	2,312	87	74.9

Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.



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The Week at a Glance

141,209-CAR YEAR: During the 12 months ended June 30, there have been ordered a total of 141,209 freight cars, which tops the total reported for any calendar year since 1924, when 143,728 were bought. These and other data on 1941's active equipment markets are discussed and charted in the monthly review for June which appears in the "Equipment and Supplies" columns. Totals for June were 29,799 freight cars, 140 locomotives, and 82 passenger cars; for this year's first half—92,559 freight cars, 660 locomotives, and 442 passenger cars.

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4.03 PER CENT RETURN: Net railway operating income, or what the A. A. R. now calls "earnings before interest and rentals" amounted to $342,702,129 in this year's first five months—a return of 4.03 per cent. That compares with 2.34 per cent for the same period last year, and with 3.51 per cent for the January-May period of 1930.

●

TAX ON FARES: The House committee on ways and means which is considering proposed tax legislation has voted to accept that Treasury Department recommendation calling for a five per cent tax on passenger fares of rail, bus, air and steamship lines. The estimated annual yield from the levy has been put at $37,600,000; and fares of 35 cents or less would be exempt.

●

ACCOUNTANTS' MEETING: Last week's annual meeting of the Accounting Division of the A. A. R. was held "under conditions stimulating high professional interest," according to the report elsewhere herein by our staff correspondent who attended the Denver sessions. His story covers the speeches, and the annual reviews by Division officers; it highlights discussions of committee reports and other business before the convention. George Carmichael of the New Haven is the new Division Chairman, succeeding Tom Seay of the Southern.

●

LOCOMOTIVE EFFICIENCY: Some time ago the Norfolk & Western set out to design locomotives that would pull more, run faster, have more availability and dependability, and at the same time burn less coal and cost less to maintain. A large order! But it has been filled, as C. E. Pond, assistant to the N. & W. superintendent of motive power, demonstrates in one of this issue's feature articles.

●

"ADDED COST" PRICING: The electric power industry increased its sales of electrical energy more than three-fold between 1922 and 1939, while the railroads had a much less satisfactory trend of sales volume. But the electric power industry does not try to apply the *average total costs* test where the threat of power production by a large user makes the situation a competitive one—it goes after such business on an "added cost" basis, thereby obtaining at least some help in meeting fixed costs. Our competitive traffic scouts this week want to know wherein the principles applicable to railroad pricing differ; and they suggest that much of the business moving by competing forms of transportation could have been retained by the railroads if they (regulatory authorities permitting) had tackled each specific competitive situation of any magnitude with the "added cost" technique.

●

THE MORE, THE MERRIER: That would seem to be one thought behind forwarder-regulation bills which Representatives Bulwinkle and Wolverton have introduced in the House—without waiting for the committee on interstate commerce, of which they are members, to frame its official proposals. Under the bills, the I. C. C. could not refuse a forwarder license to an applicant because of its ownership by a common carrier; nor could an adverse ruling be made because a proposed new service would be in competition with that of other forwarders. In other words, railroads could organize and maintain control of forwarders; and, moreover, there could be no commission finding like that in the Freight Forwarding Investigation to the effect that railroads, through their controlled forwarders, were offering services at rates different from those published in rail tariffs.

●

WAR AT HOME: Property-grabbing wars are not the exclusive habit of peoples abroad. We have them at home, too—a great one is now being waged against our middle class. That is the theme of this issue's editorial which cites the proposed reorganization of the Chicago & North Western, now earning at the rate of $3.20 a share on stock the I. C. C. would wipe out, as a classic example of the way socialist economic philosophy works to ruin the middle class, especially when great investing institutions join with labor unions to "get theirs" regardless of consequences to anybody else. Warning that the enemy is organized, powerful and determined, the editorial goes on to advise the middle class that it had better act in like manner, lest it wake up one day to find that the doctrine of equal income for unequal brains, ambition, work, and thrift has been so drastically applied by labor and government that individual efforts to get along better than average have been legislated into a crime.

●

CUSTOM-MADE STUDIES: The St. Lawrence Survey, functioning in the Department of Commerce at the request of President Roosevelt, has been doing a job of the custom-made variety for the Administration point of view. The latest report released by Survey Director Danielian is no exception. Considering "The St. Lawrence Seaway and Future Transportation Requirements," it concludes that the ditch, while attracting "but a fraction" of future freight-traffic increases, would at the same time take part of the load off traffic peaks and thus relieve the railroads from the necessity of providing much stand-by equipment. We'd say that enough of their competition is already subsidized to give the railroads as much "relief" of that sort as they can stand.

WHEAT MOVEMENT LICKED: While the Kansas winter wheat movement began in large quantities only this week, the wheat-carrying roads are in a position to say that they can handle the unusually large crop without delays. How this is being brought about as a result of thorough organization, advance planning and follow-through supervision under the expert direction of the Car Service Division, which has the ready co-operation of all concerned, is told in a news story herein.

●

$1,338,000,000: That is our best estimate of what railway buying amounted to from June 1, 1940, when the national defense program was launched until June 1, this year. The total for 1941's first five months was $640,679,000. Elsewhere herein are reassembled certain of our data on railway buying to show values from June 1 of each year as well as for the regular calendar period.

●

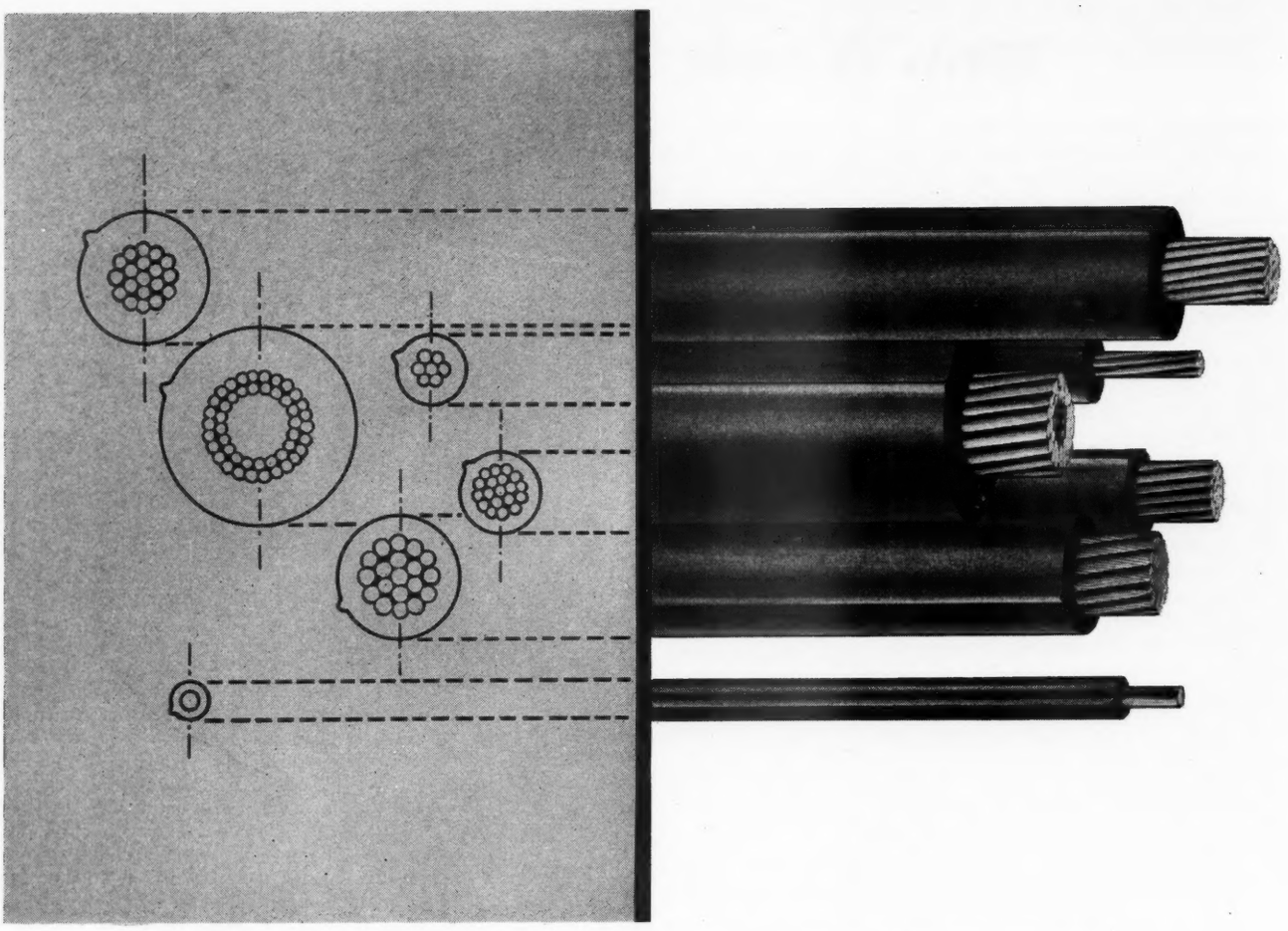
PRIORITIES: An obscure subject only a short while ago, the priorities question has lately become one of increasing interest to the railroad industry which is beginning to feel the pinch of the national defense program. A railroad-point-of-view survey of what the Office of Production Management and Office of Price Administration and Civilian Supply have done to date is presented on another page.

●

MATERIALS: Because the need for effective utilization of materials has come to the fore in connection with the national defense program, last week's annual meeting of the American Society for Testing Materials took on increased importance. The meeting, held in Chicago's Palmer House, is covered in a feature article herein. Among other interesting features, the discussions covered many matters of pertinence to the railroad industry, especially in the present era of higher train speeds which call for widespread changes in many material specifications for both equipment and roadway.

●

NO BOARD, NO MONEY: The last of the deficiency appropriation bills for the fiscal year beginning July 1 was passed this week, but Congress failed to meet President Roosevelt's request that it provide $100,000 for the non-existent study-board called for in the Transportation Act of 1940. It is understood that the Congressional appropriation committees felt that there was no need to provide funds for the board as long as its members had not received Senate confirmation. Later in the week the sectionalism angle came into the open in connection with the board; Senator Stewart of Tennessee proposed legislation to prohibit the appointment of more than one member from any of the five freight-rate territories. The Nelson Smith and Charles West nominations remain before the uninterested Senate interstate commerce committee, while the President has substituted no one for Wayne Coy, assigned to other duties with the Office for Emergency Management.



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INSULATED WIRES AND CABLES

The Week at a Glance

CARLOADINGS: For the July 5 week, which included the Fourth's holiday—740,493 cars, down 18.5 per cent from the previous week but up 16.2 per cent above the corresponding week last year and 33.4 per cent over the comparable 1939 week.

●

JUNE EMPLOYMENT: There were 1,156,144 persons working on the railroads in June, according to the I. C. C.'s mid-month count. This was an increase 11.63 per cent above June, 1940; and the employment index, based on the 1935-1939 monthly average, was up to 110.9.

●

WHEAT ROLLING ALONG: The crucial period in handling the winter wheat crop has now passed; and the railroads have made good on their promise to take this mass transportation job in their usual stride. They did get one "break" when weather conditions caused the harvest to last longer and be less concentrated than in other years. That helped, but they hadn't been relying on getting any "breaks"; the careful advance planning and cooperation of all concerned are paying out in the form of a job smoothly and completely done, without car shortages. And to show how "jake" things are, the Car Service Division has canceled Special Car Order 43 which has been requiring the speedy return of Western box cars for the handling of the crop.

●

BROWN TO LEHIGH: Revelle W. Brown, vice-president of the Reading and Jersey Central since 1935, has been elected president of the Lehigh Valley, succeeding Albert N. Williams, now president of the Western Union Telegraph Company. A feature article herein reviews Mr. Brown's railroad career which began back in July, 1901, when he became a Baltimore & Ohio laborer.

●

ANOTHER FORWARDER BILL: The sub-committee of the House committee on interstate commerce, which has been working on forwarder legislation, this week turned in its draft of a proposed regulatory bill, revealing that Members Bulwinkle and Wolverton were giving a preview of their colleagues' views when they introduced the "wide-open" measures covered last week. Forwarders didn't like many features of the Bulwinkle-Wolverton proposal; and they got about the same dose from the sub-committee, although they are finding some consolation in one change—the elimination of the exemption for forwarders of "a single general commodity."

●

TRUCK-NET MYSTERY: I. C. C. reports of motor carrier earnings for 1940's fourth quarter show that Central Region truckers were then operating under "increasing costs" and "decreasing returns" while carriers in other regions, particularly New England, were going the happier way of "decreasing costs" and "increasing returns." Suggesting that this startling paradox merits searching investigation, our traffic "box" this week hints that such a probe might well begin with a critical appraisal of pricing policies. Central Region truckers (already much given to tying their rates to the rail structure) are seeking rate increases, still more closely to parallel railroad rates; New England carriers undertake to relate their rates to their own operating costs, thereby giving consideration to the inherent characteristics of trucking. Both can't be right; but the New England truckers are not the ones who are in distress.

●

WHAT I. C. C. SEES: It sees a million-car week during the coming fall period of peak carloadings—so Chairman Eastman and Commissioner Johnson recently told a Senate committee which was looking over proposed appropriations for the commission's emergency car service work. The commissioners also see "tight" car situations ahead; but they are confident that if the A. A. R. and the commission "do our full duty" a million-car week can be taken care of. But it is going "to have everybody on his toes." The Eastman-Johnson presentation is covered in the news pages.

●

CASE FOR BANKRUPTCY: A case for bankrupting the railroad industry is what labor leaders are really developing as they attempt to support their various demands, including advances in wages averaging 41 per cent. The principal argument of the build-up appears to be a contention that employees are entitled to share in the prosperity of a period in which the industry is making net operating income at the rate of about a billion dollars a year. The editorial herein examines that labor argument, with particular reference to its statement in a recent article by President Robertson of the Brotherhood of Locomotive Firemen and Enginemen. Earnings for 1941's first quarter are restated to give effect to the cost of labor's demands; the effect would have been to convert the $201,500,000 net railway operating income then earned into a $242,000 *operating* deficit. Compliance for the full year would wipe out 900 million dollars of the billion-dollar N. O. I. looked for under the present set-up; and the result would be a 1941 deficit after fixed charges of 373 million dollars—three times as large as that of 1932, the depression's worst year.

●

INFLEXIBLES WON'T FLEX: Disposing of a "recently-to-the-fore" suggestion that railroad freight rates should be linked to destination prices of agricultural products in a manner calculated to keep the rate-price ratio constant, Clifford C. Matlock of the Bureau of Agricultural Economics has reminded proponents of the idea that they would have to include plans for making the costs of the railroads flexible too—seemingly an insurmountable obstacle, "in view of wage and other expense rigidities." In other words, Economist Matlock recognizes that the railroads have many rigid costs "that must, like costs of farmers, be met in bad years as well as good." His observations on the freight rate-price problem are embodied in a study which is reviewed back in the news pages.

BOAT SHORTAGE: So great has been the transfer of American ships to British routes that intercoastal service through the Panama Canal is experiencing a serious shortage of vessels; and transcontinental railroads are being called upon to handle large amounts of freight that heretofore moved by water. That situation is brought up to date in one of this issue's feature articles, which predicts that the railroads, having thus far absorbed the additional business with ease, will encounter no difficult problem if the highest estimates of the amount of new traffic involved are borne out.

●

OIL BY RAIL: Petroleum Co-ordinator Ickes has been promoting the use of idle tank cars for petroleum traffic formerly handled on coastwise tankers now transferred to British service. This week the idea clicked; and Mr. Ickes turned out a statement to "ballyhoo" the "first shipment in many years of crude oil to the East coast by railroad tank cars." It was a movement of 25 cars from the Lima, Ohio, terminal of the Buckeye Pipe Line Company to the Bayonne, N. J., refinery of the Standard Oil Company of New Jersey.

●

HIGH LOGGING TRESTLE: Innovations in design and unusual methods of construction were involved in the preframed creosoted timber trestle which has been built by the Weyerhaeuser Timber Company to carry a standard-gage logging railway across a deep ravine in the eastern part of Washington State's Cowlitz county. The structure, described in a feature article herein, is 1,130 ft. long; and it gets as high as 235 ft., thus becoming one of the country's highest of its kind.

●

EQUIPMENT STOCK PILE: The R. F. C. would be willing to assist the railroads if they wish to establish a "national defense" equipment pool—so Jesse Jones said this week in commenting on published reports about a proposed billion-dollar freight-car program. The A. A. R. and the Defense Commission's Transportation Division, so they said, learned about the program from the newspapers; while Mr. Jones' idea would not be to set out after a billion dollars worth of equipment. He would have enough orders placed to keep car builders busy; and if the railroads didn't want the full output, R. F. C. could take the balance and place it in a "stock pile."

●

LOCOS PREFERRED: Materials essential to locomotive construction have been given preferential delivery status under an allocation program issued July 7 by the Office of Price Administration and Civilian Supply. This gives such materials the same type of OPACS blessing accorded freight-car materials on June 10; although the car materials are still ahead, having become twice blessed when the Office of Production Management on June 19 followed along after OPACS and came through with a limited blanket preference rating for 60 builders.

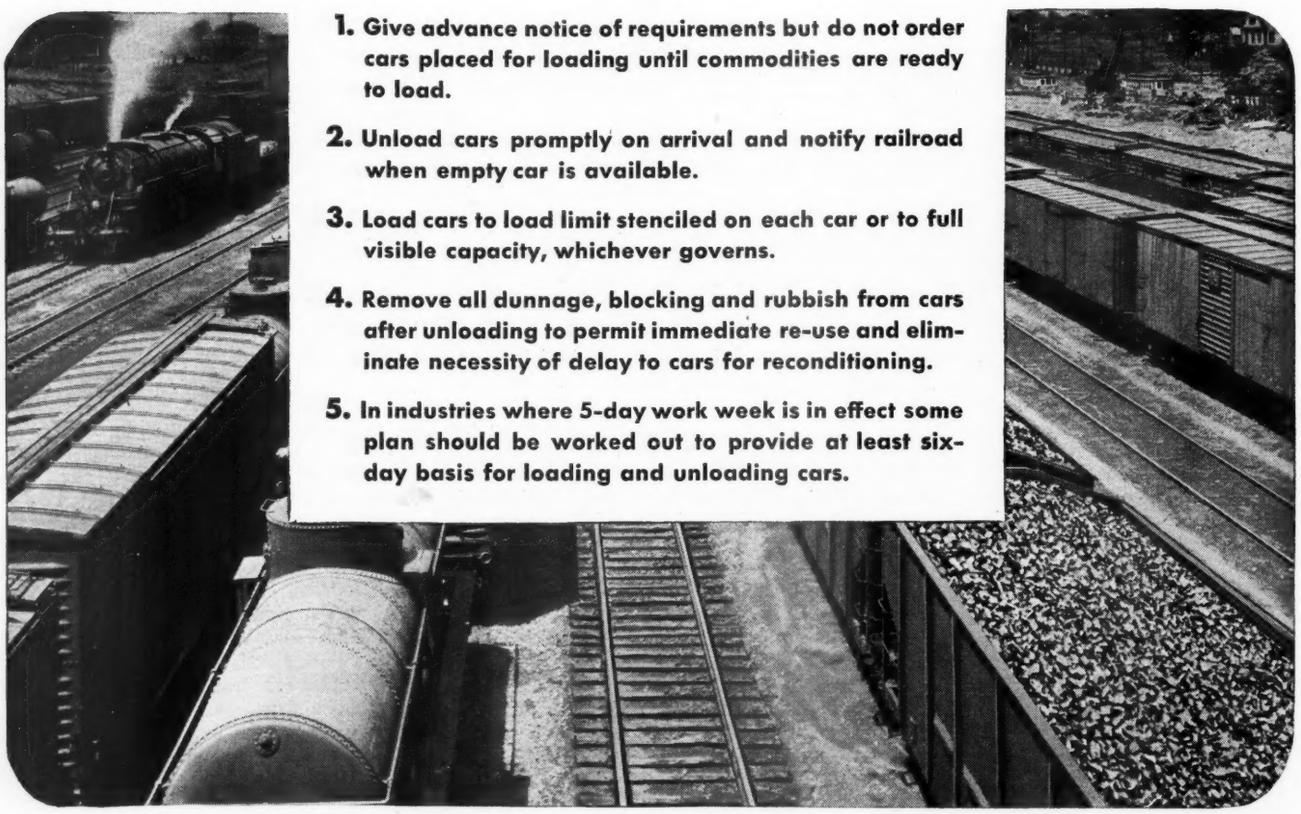
Shippers Save Money by Saving Cars

SHIPPERS who have been cooperating with the railroads' full loading program report *real and direct benefits to themselves.* We get such letters as these:

"It looked as though we would have to build more sidings to take care of increasing business. But by merely stamping all purchase orders *'ship maximum carload weight'* we found we were able to handle more freight more promptly with existing track and platforms."

Another shipper who now moves in three cars the same amount of freight he used to move in four writes, "Heavier loading is a great advantage to both shipper and receiver. We need less cars, less platform space. It costs less to load. The saving on special lining and packing alone in our case is approximately $9,000."

So both to conserve the car supply for national defense, and for your own convenience and economy we urge you to follow these common sense practices as recommended by the National Defense Advisory Commission:



1. **Give advance notice of requirements but do not order cars placed for loading until commodities are ready to load.**
2. **Unload cars promptly on arrival and notify railroad when empty car is available.**
3. **Load cars to load limit stenciled on each car or to full visible capacity, whichever governs.**
4. **Remove all dunnage, blocking and rubbish from cars after unloading to permit immediate re-use and eliminate necessity of delay to cars for reconditioning.**
5. **In industries where 5-day work week is in effect some plan should be worked out to provide at least six-day basis for loading and unloading cars.**

How Much Shippers Can Help

The importance of the contribution which the shippers are asked to make is shown by these examples:

It would add the equivalent of 100,000 cars to the nation's supply if the average "turn-around" time of each car could be reduced one day by faster unloading.

It would add the equivalent of 30,000 cars if the average loading of carload traffic could be increased by one ton—through such simple improvements as better planning of shipments or improved package design.

ASSOCIATION OF

AMERICAN RAILROADS

WASHINGTON, D. C.

The Week at a Glance

MORE ON RAIL RESEARCH: The major cause of rail fissures is shatter cracks in the rail head. But it takes at least a 20-ton wheel load to cause a crack to spread into a fissure, and an article herein reveals these findings from the continued research on rails being carried on by the A. R. E. A., which has also discovered some of the causes of excessive wheel loads and some methods of minimizing shatter cracks.

●

CAR BUILDING LAGS: The car manufacturers are already 7,500 cars behind on their orders and, due to interruptions arising from the material shortage, the railroads may be shy 20,000 cars this fall which they had counted on to handle the year's peak business. So Transport Commissioner Budd informed the Short Line Association in Chicago this week; and, he added, unless the materials situation improves, the car-building program may fall down even more seriously next year. Mr. Budd believes that, by earnest co-operation of shippers and more intensive supervision by the carriers, the present supply of freight cars can be made to do at least 25 per cent more work than it now produces. But the job of getting the materials to the car-builders so they can construct the cars the carriers need is one over which neither his office, nor the railroads, have any control. Co-operation, it seems, is needed from others besides the railroads and shippers.

●

LA GUARDIA RR CRITIC: The Mayor of New York sees an end to the railroads—and it doesn't bother him a bit. This view he made clear at the hearings on the St. Lawrence project this week. The St. Lawrence, in his opinion, represents "progress" and a "natural" means of transportation (although "nature" in this case has to be aided by a far greater per-mile expenditure than would be necessary to construct a railroad of much larger transportation capacity). The railroad "fellows" are "nice," Fiorello conceded, "but they do not impress." La Guardia is the type of politician who is hailed by organized labor, including railroad labor, as its friend. But then, most of the politicians pushing the St. Lawrence wouldn't be where they are except for the votes of organized labor, including railroad labor.

●

A SHOE - STRING BUSINESS?: What kind of a restaurant is it where the proprietor has to get an advance from his patrons before he can buy the groceries to make a meal for them? If the railroads are unable to provide out of their own pockets—or on their own credit—funds needed to provide equipment to handle the traffic offered to them, then what kind of a business is railroading? This is the answer given in the leading editorial herein to D. B. Robertson's suggestion that the carriers ought to pay out most or all of their net earnings to employees in wage increases; and then call on the government to supply the rolling stock needed to handle defense traffic. Besides, the editorial asks what moral right railroad managers would have thus to allow the carriers to become private business in name only, without the consent of the stockholders, whose interests managers have been hired to defend.

●

INCOME AND BUYING POWER: The volume of railroad purchases of equipment and materials rises and falls directly with net railway earnings—a condition which is inescapable under private ownership and operation. Present carrier earnings (at around a billion a year) are no more than are necessary to sustain equipment buying at the current level. Since the exigencies of the defense situation can permit no decline in the present rate of railroad acquisition of new equipment and materials—it follows, if private operation is to continue, that *any increase in railroad expenses must be offset by an increase in rates.* The editorial herein, accordingly, suggests that, if any increase is granted in the wages of employees, then such increase should not be made voluntarily by the carriers but should come only through machinery provided by the government. Then the politicians who are responsible for putting the carriers in the hole will have to acknowledge their authorship; and will have the moral responsibility to assist the railroads in retrieving the revenues thus cast away.

●

A TOUGH SCHOOLMASTER: The relationship between railroad net earnings and purchases from manufacturers is one which has attracted small attention in proportion to its importance. Railroad capacity was seriously depleted through the decade of the 'Thirties—by the depression and our socialist-labor government; whose henchmen then accused the carriers of the crime of "overexpansion." The American people, by the way they voted in the last two elections, decided to learn the principles of economics the hard way—by experience—instead of by listening to the counsel of men learned in that science. So far, there is little evidence that those who chose this course have awakened to the consequences of their choice. They persist in the delusion that continued "progress" is all that lies ahead of them. Experience is a leisurely schoolmaster, but, in the end, a pitiless disciplinarian.

●

TRUCK WAGE "FLOOR": When the wage and hour people went after the railroads to jack up their minimum wage, the so-called "public" representatives on the commission appointed for this purpose were pedagogues. (Users of transportation, who have to pay the bill, don't seem to qualify as "public" any more.) Well, now it looks as though a similar set-up has been arranged for the bus and truck business. On their minimum wage committee, all the "public" members are professors—one of them being W. H Spencer of the University of Chicago. Seems like we have heard the name before.

LEON WAGS A FINGER: The burly and bustling chief of the commissariat known as OPACS—Leon Henderson—shook an admonitory digit this week at the transportation industry. He foresees the possibility that priorities may soon have to be applied in the transportation business. "There has," he says, "been too much pious shouting about the capacity of American industry to handle any load thrust upon it." We ought to have been building a lot of freight cars a year ago, Leon now thinks.

●

WHEAT STORAGE USED UP: On July 9 the Kansas City Board of Trade asked shippers to send no more wheat into that market—unless the shipper had made prior arrangements to assure unloading of his consignment at destination. On July 14 there were 1,100 cars of wheat in the yards at that point, which could not be unloaded because of the lack of storage space. Accordingly, further shipment of wheat to this great market was embargoed, except where the shipper can show that arrangements have been made to assure unloading on arrival. Tight situations are developing at Hutchinson, Salina, Wichita, St. Louis and St. Joe—and at Minneapolis and Duluth. An article herein by our transportation editor gives the essential details of the situation. The railroads have done a splendid job. The break-down has arisen from (1) a tough enough situation to begin with, plus (2) a molasses-like movement on the part of the Commodity Credit Corporation in getting storage space organized.

●

WHEAT IN GONDOLAS: A familiar feature of English railroading—gondola cars covered with tarpaulins—may make its appearance on the Kansas prairies. The Santa Fe has begun an experimental movement of wheat in open-top cars. It is believed, by covering such cars with tarpaulins, they can handle about twice the load of the ordinary box car.

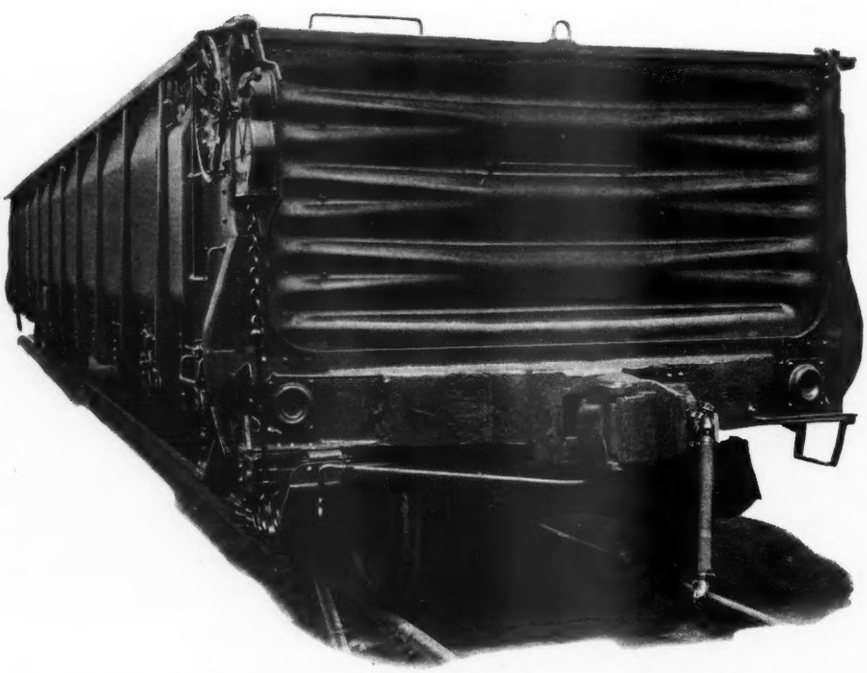
●

NEW S. P. CARS: Beautiful and serviceable passenger cars—51 of them—as additional equipment for the Southern Pacific's justly-famous "Daylight," "Lark," and "San Joaquin" trains, are described and illustrated in an article herein. There is a considerable variety in the interior color schemes of these cars—their exteriors, of course, conforming to the resplendent liveries of the trains they will comprise. The cars are unusually wide and embody interesting features of design and construction. Included in the lot are several triple-unit dining cars (two units for customers and a middle one for a kitchen), which are, probably, one of the main attractions which these cars offer to the throngs which are riding them. And they include a public address system and luggage elevators, both of which are welcome attractions to the customers (your reporter speaks from recent personal experience).

DREADNAUGHT DROP END GATE

STRONG — *TO ABSORB SHIFTING LOAD SHOCKS —UNIFORM OVERALL STRENGTH—*

RUGGED — *TO STAND ABUSE IN LOWERED POSITION*



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The Week at a Glance

FEATHERBEDS & MORALS: Not even socialism—and certainly not a system of economic freedom—can long countenance large payments for work not done, and survive. The leading editorial herein makes this observation in a comprehensive attack on economically and ethically disgraceful interpretations of the "featherbed" rules, by which the carriers (and, indirectly, their employees who really work) are shaken down by some of the unions—aided and abetted by the referees of the Chicago Board. The editorial cites numerous instances where the roads have been victimized by raids of this kind; and suggests, that however "legal" they may be, in principle and in effect they work out in much the same way as the out-and-out union "rackets," so effectively publicized by Westbrook Pegler. The editorial suggests that, since railway managers do not own the railways, they have "no moral right and a very doubtful legal right to make large payments for work not done." The corrosive effect of these payments on morale is stressed and the hope is entertained that, this time, managements will go through with their announced intention of having these rules considered along with proposed changes in wages.

●

STEAM & DIESEL: The relative advantages and disadvantages of the modern steam locomotive, as compared with the Diesel-electric, and vice-versa, for various localities and for every railroad job were thoroughly canvassed at a recent meeting of the American Society of Mechanical Engineers in Kansas City, reported herein. The paper was by E. E. Chapman of the Santa Fe, with a number of authorities on the engineering side of the motive power department contributing to the further clarification of this complex and important subject. The nature of the fuel supply—which differs widely from road to road—is seen to be one of the important factors bearing on the comparative merits of the two forms of power, both of which, spurred on by competition, are plainly undergoing rapid improvement.

●

HAGUE & N. J. TAXES: Mayor Hague of Jersey City has been ruling his domain high, wide and handsome for many years—in large measure by means of the notoriously high taxes which Jersey has been levying on its railroads, some of them bankrupt and others not far removed. For years there has been contention over these excessive taxes on the carriers, with all serious students agreeing that they must be reduced—and Governor Charles Edison sponsored a compromise measure to provide some such relief. This measure, threatening Boss Hague's municipal revenues, roused him to demagogic attacks on the Governor and on what he calls "the rich and powerful railroad lobby." Well, Governor Edison's reform measures were enacted by the legislature—and elsewhere in these pages a short article summarizes the situation. Particularly noteworthy (it seems to your observer) are some remarks of Governor Edison, which show a pretty good understanding of the railroad situation; and also the suggestion of an attitude on "glittering" superhighways which is both healthy and courageous.

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PIPELINE HOKUM: The oil situation in Eastern territory is surveyed in an article elsewhere in these pages and the conclusion is reached that efficient use of the existing supply of tank cars can prevent a shortage of petroleum products in this area—despite the transfer of additional tankers to the aid of the British. The extensive new pipelines, in behalf of which there has been so much publicity, and "bum's rush legislation," are shown to be not needed. It is another case of "defense" being used as an excuse for projects which various governmental and business interests were trying to put over before this convenient argument fell into their laps.

●

PASSENGER CAR POOL?: Uncle Jesse Jones had a press conference on Tuesday. He denied knowledge of a project to have the federal government build a fleet of passenger cars to be used in troop movement, although he said, there had been some discussion as to government aid in providing troop-carrying rolling stock. He also said there was nothing new on the proposed freight car pool.

●

MODERNIZED RATES: The "traffic box" on the editorial pages herein calls attention to the significant conclusions on the competitive rate situation reached by the I. C. C.'s rate expert, C. G. Jensen.

●

SID, YOU'RE ALL WET: The labor member of the "high command" in OPM, Sidney Hillman, called upon the railroads and the railroad unions this week to turn over from 100,000 to 400,000 mechanics to the aircraft and shipbuilding industries. But Ralph Budd came right back (see news pages herein) and said the carriers couldn't spare any skilled mechanics—that they were going to have to use all the trained men they have to keep their facilities in a high state of repair to meet the demands of traffic. Mr. Hillman's colleague, W. S. Knudsen, is opposing a heavy curtailment of automobile production, for fear it will throw men out of work. Sid ought to get the mechanics he needs from that source, without pulling the Pied Piper on the railroads.

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"CONSENT" DECREE: The A. A. R. has signed a decree of the D. C. District court which not only prohibits any kind of collusion by the railroads in refusing to make joint rates with truck lines, but gives Justice department snoopers access to carrier correspondence to make certain that the decree is being scrupulously obeyed. "Buster" Arnold, who instituted this case, expects that there will now blossom forth a lot of railroad-truck collaboration in through routes and joint rates to the benefit of communities "not now adequately served by railroads."

TRANSPORT AND DEFENSE: It has been pretty generally talked around for the past few weeks that there would soon be established in Washington a larger and more powerful transportation defense agency—to take the place of the office now headed by Ralph Budd—the new organization to have as its chief, maybe Mr. Budd, but maybe somebody else, possibly Mr. Eastman. At his July 22 press conference, however, President Roosevelt denied that any such change was impending. He is satisfied that, so far, the present set-up is meeting the needs of the situation. However, the President indicated that his existing contentment with the *status quo* might not persist for more than three or six months.

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TRAVEL IN APRIL: Class I bus lines took in eleven million dollars in April, which was almost 39 per cent more cash than they rang up in April a year ago. Excluding commutation, the railroads in April gathered in 39 million dollars in passenger revenues, which was about 33 percent above last year.

●

HIT CLASS RATE PROBE: The railroads have joined in a petition to the Commission to put an end to its investigation into classifications and class rates. The roads take the position that there is no emergency in the freight rate situation, but there is one in the handling of defense traffic—so the carriers ought to be permitted to concentrate their attention where it is most sorely needed. With this view there will doubtless be widespread agreement—and yet, is there no "emergency" in the fact that truck traffic continues to expand at a more rapid rate than that of the railroads; and in areas where railroad service is economically superior? If rate adjustments which would give the railroads a larger share of the traffic to which they are economically entitled were a little more clearly foreseeable as a result of the inquiry the I. C. C. has started—probably it would be looked upon with more favor.

●

A-3 LOCO. PRIORITY: Materials for the construction and repair of locomotives have been given an A-3 preference rating by the OPM, which is the same rating applied to freight car materials. This blanket rating, it is hoped, will cut down on the "paper work" heretofore necessary, when a separate application for priority had to be made on every batch of stuff ordered to replenish the locomotive supply.

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TIE RENEWALS IN '40: Tie replacements by the railroads ran slightly less in 1940 than in 1939, according to detailed figures—by individual roads—published elsewhere herein. Of the U. S. lines reporting to the A. R. E. A., 61 put in more ties per mile of track in '40 than in '39, while 68 put in fewer—and 4 inserted an equal number in both periods. The proportion of treated ties to total was slightly less than 85 per cent.

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AMERICAN STEEL FOUNDRIES

The Week at a Glance

JUNE EARNINGS: In June, net railway operating income ran at the annual rate of 4.31 per cent on the investment. In the first six months of the year the annual rate was slightly over 4 per cent. This rate is 17 per cent *below* the level attained by the carriers in 1929, while the average rate of pay of railway employees is approximately 13 per cent *above* what it was in 1929.

●

AFTER US THE DELUGE?: What good is it going to do the railroads, or their employees, if they do a good job of railroading—and enjoy relative prosperity and the retention of private ownership—for the next few months; and then lose everything the minute the present "emergency" subsides? This is the question raised in the leading editorial herein, which argues that planning for the "long pull" is just as important *now* as is doing a good job of supplying, loading and moving cars. What is going to be the problem when the "emergency" is over? Obviously, to obtain traffic sufficient to provide a reasonable degree of employment and to earn a reasonable return on the investment in railroad plant. How else can the railroads hope to pull through the post-emergency crisis unless, when it comes, they are prepared (1) to keep their costs (including their labor costs) at a reasonable competitive level and (2) to reflect the economy of railroad service in rates which will hold and attract competitive business?

●

TRUCK RATE THEORY: The truck fellows seem to think that the I. C. C.'s present inquiry into classifications and class rates (which the railroads want postponed) may serve to stick the railroads with high artificial "costs"—and thus give the trucks an even wider field to "pick-and-choose" from than they now enjoy. At any rate, such is a fair conclusion to draw from the A. T. A.'s petition to the I. C. C. to continue its inquiry. The truckers kick at alleged "below-cost" rates by the railroads on traffic which the highway boys would like to handle—and, from that argument, their hopes from the class rate inquiry are revealed. Ever since truck regulation was established under the N. R. A., dominant trucking interests have looked upon regulation, not as a device to give the public the advantages of competition where it does not exist by nature, but rather as a means for establishing monopoly in a situation which is naturally competitive. This turns the whole theory of regulation topsy-turvy. The question is—does the inversion protect the public interest, or is that inverted too?

●

FIGURE JUGGLING: Suppose a man owned a house which he rented out for $25 a month, getting $300 a year from it. But suppose he had 12 different tenants in a year, each occupying the house for a month. Could that man honestly say: "I have a house which I rent out at a cost to the tenant of only $25 a year?" Obviously, such a statement would be inaccurate, if not downright dishonest. But take a look in the news pages herein and you'll see that this exactly parallels the statistical technique the Railroad Retirement Board uses in order to get at a low "average wage" per employee. Even worse than the above example about house rent, the Retirement Board even includes employees who worked only a few *days* in getting its *annual* averages. And, as was to be expected, the Sirs and Brothers are using these misleading figures in an attempt to fool the public into thinking that the typical railroad employee makes a lot less money than he really does.

●

TRANSPORT BOARD: President Roosevelt has revised the membership of the transportation board, previous nominees to which had never received a Senate okay. Smith of the New Hampshire commission continues as a nominee but Messrs. West and Coy have been replaced by Webb of Kentucky and Childe of Nebraska. The latter is chiefly known for his advocacy of inland waterway transportation, especially that of the Missouri River. Mr. Webb is on the State Commission in Kentucky.

●

GRAIN STORAGE: The northwest is going to have a good wheat crop this year, with no place to put it. This situation, and the problems arising from it were canvassed at the meeting of the shippers advisory board in Fargo on July 29. There is no transportation difficulty with respect to this crop, the carriers having ample supplies of cars on hand to meet all demands. The alternatives open to the farmer are not particularly attractive to him, nor to the railroads, which could use the revenues which would accrue from the movement of this crop.

●

CANDOR FROM GAVIN: President Gavin of the Great Northern was the speaker at the Fargo meeting and he pulled no punches in his analysis of current economic and social trends. He drew attention to the legalized confiscation of railway property in this country and added "there is scant difference to the person who has been despoiled—whether it be by the armies of a Hitler, or by procedures operating within the structure of a great democracy."

●

RULE CHANGES REFUSED: The negotiations of the railways and the unions on the demands of the latter for large increases in basic wages, and the efforts of the railways to secure modification in the "featherbed" working rules, got well under way in Chicago this week. The first development was the flat refusal of the unions even to consider any modification of the rules, the transportation unions issuing a joint statement condemning the carriers' proposals as "ill-timed" and "artfully designed to delay consideration of the employees' proposal for increased rates of pay." A. F. Whitney made a great deal out of the fact that not all the carriers are asking for identical rule changes. An article in this issue gives the background of the conference, and the progress it made in the first few days of sitting.

LOCO. GAS VS. STRUCTURES: The disintegration of concrete and steel structures over tracks, by blasts and gases from locomotive stacks, has been warded off by the C. N. R. by an installation which is described elsewhere in these pages.

●

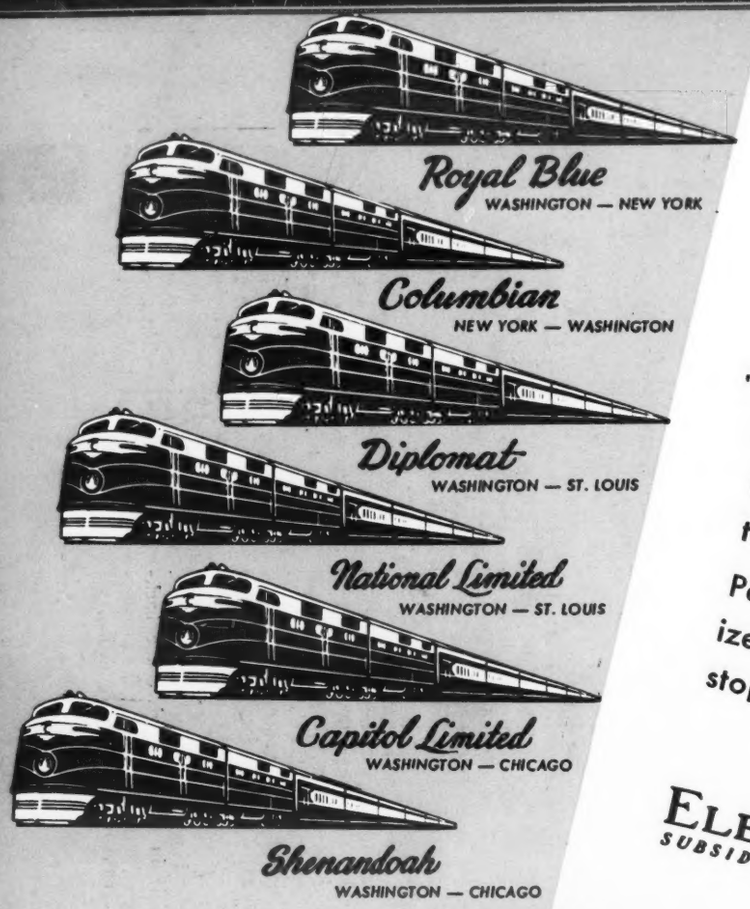
ROBERTSON'S "KAMPF": D. B. Robertson has written, in miniature, his own "Mein Kampf"—*32* mimeographed pages which reveal his social philosophy, his likes and dislikes, and all the arguments that he can muster to sustain his point of view. This document is reviewed in the news pages herein. In general, its purpose is to defend the demand of the railway unions for largely increased wages, and for the retention of "featherbed" rules. Indicative of the type of reasoning the author employs is his contention that these working rules are "a source of protection to the security holders of the railroads" because they "prod management to make more efficient use of the security owners' property."

●

FAULTS OF MANAGERS: Mr. Robertson also castigates railway managers in somewhat the same manner that the prototype "Mein Kampf" goes after the Communists and the parliamentarians. They, in his opinion, are solely to blame for the unsatisfactory situation of the railways. They are not to be credited with increased railway efficiency. That, it appears, is so exclusively the product of railway labor that employees are the only ones who are to be permitted to enjoy the fruits of the improved performance. Set apart for especial condemnation by Mr. Robertson in this paper, and its editor in particular. We occupy, roughly, in Mr. Robertson's prognosis, the unenviable position accorded in the forerunner "Mein Kampf" to the Israelites. It is perhaps germane to this literary note to recall that the railway labor executives some time ago gave their adherence to the "Moral Rearmament" movement, one of the tenets of which is that the individual confesses his own sins, and not those of other people.

●

FREIGHT RATE INDEX? An intrepid scholar and statistician, R. C. Gilles, in an article elsewhere in these pages attempts a task which, so far as we know, has never been tried before—that is, to construct an index number of freight rates. The figure usually used for this purpose—average revenue per ton-mile—is a fair reflection of the price of railroad service to those who use it at any given time; but it does not take into account the shift in the character of traffic. Hence, it needs to be used with caution. The same may be said also for the figure our author has constructed (assuming that the method he employs is acceptable)—because it takes no account whatever of the shift in the character of traffic. The average ton-mile rate has the effect of understating the impact of freight rates on the individual shipper. The index shown in Dr. Gilles' article gives no weight at all to the effect of the loss of high-rated traffic on the railroads.



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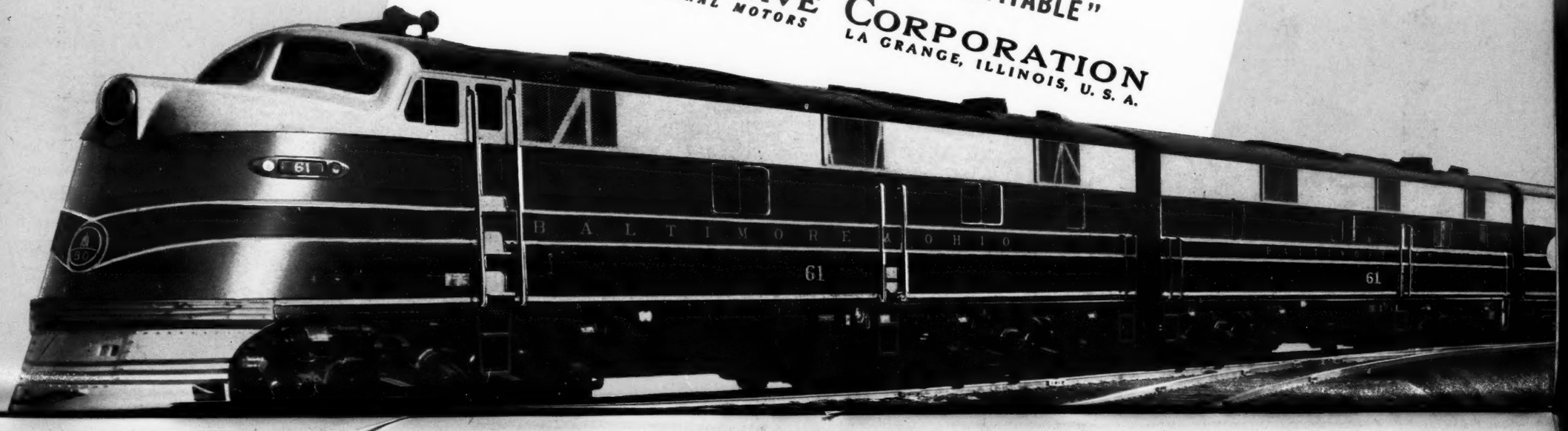

The Week at a Glance

FIGURES DON'T LIE, BUT: How come that the I. C. C. figures the average annual railroad wage at $1,886 and that D. B. Robertson, using some special-purpose compilation of the Railroad Retirement Board, puts out an average of only $1,354? The leading editorial herein explains the discrepancy—which arises by the Retirement Board, including employees who worked only a few hours during the year in its division; and by the Retirement Board's exclusion of all wages in excess of $300 a month. No competent statistician would have any trouble in deciding which of these two averages is the true one. Probably, nobody skilled in elementary arithmetic—and really looking for facts—would be stumped either.

●

$3.67 PER HOUR: In his discussion of railroad wages, Mr. Robertson was particularly silent about the pay of engineers and firemen—the employees he represents. The leading editorial herein remedies this omission by giving a few incontrovertible figures on the "gold coast" sector of the railway labor world. Take a passenger engineer on a 150-mile run with an engine weighing under 250,000 lb. on drivers. At 50 miles per hour, this man makes 1½ days' wages, or $11.01, in three hours—or $3.67 per hour. Mr. Robertson thinks (although he is careful not to say so in specific figures) that this $3.67 man ought, instead, to be getting $4.77 per hour. Looks kind of foolish for railroad men to be wasting their money sending their sons to college and fitting them for professions that, usually, don't pay half so well; and demand so much longer hours.

●

WE AGREE WITH DBR: At least, in part, that is—when he says that the railroads have fumbled their handling of the labor problem. The unions are always on the offensive; the carriers usually on the defensive. The unions are hostile and reckless in their denunciation of managements and in their handling of figures. The managements, by contrast, stick to facts; and don't even use all available facts when they are such as, possibly, to cause offense to the labor leaders. It is said that truth will prevail—and so it will, in the long run. But error, if sufficiently aggressive, can certainly stand a timid truth in the corner for quite a spell.

●

STEEL SHORTAGE: A survey of leading car-manufacturing plants, reported herein, indicates that the A-3 priority on steel given the car builders by OPM isn't producing results. Shut-downs for several weeks have already occurred at several plants because of the steel shortage, and delays to production are pretty general. The situation isn't getting any better either.

●

WAGE PARLEY: The wage negotiations between the railroads and the unions have not found a common ground of agreement and the National Mediation Board has been called in, as related in our report on the Chicago sessions, reported elsewhere herein. The union leaders are displaying little disposition to get down to facts—but are grand-standing about alleged railway "profits" and the "greater productivity" of labor; and publicizing phoney figures. As if, when bigger engines and better management puts more tons into a train, the employees have anything to do with the improvement; or are required to work any harder or with any more skill than they did before. Anyhow, if "productivity per employee" is to be a measure of wages, how about the "productivity" of passenger-service employees? Passengers per train in 1923 averaged 67; in 1940 they averaged 60. By union logic, it would appear that a considerable wage *decrease* is in order in passenger service.

●

NON-FERROUS METALS: The railroads have surveyed their 1941 requirements for non-ferrous metals, and have arrived at a total of over 180,000 tons—as reviewed and tabulated elsewhere in these pages. Such of these metals as are needed for rolling stock can get an A-3 rating from OPM, but this isn't much good in the case of some stuff, where all the available supply is used up by higher ratings. Defense goods come first—and whether there is anything to haul the defense goods in when they are completed is a matter of secondary importance, by Washington reasoning.

●

SERVICING DIESELS: The ideal terminal facilities for a Diesel-electric locomotive should have an inspection pit, fuel supply and sand house so located that the whole servicing job can be done with one spotting of the engine. Such is the conclusion of a committee report on this subject, published in abstract elsewhere in these pages. Helpful advice is given on the mechanical side of the fuel supply, necessary drop-pit facilities, and the most economical lay-outs for heavy repairs.

●

HOW ELEC. POWER WORKS: How the Pennsylvania has used electric traction greatly to accelerate its freight and passenger service at the Eastern end of its line is related in a paper herein by P. R. R. Electrical Engineer Griffith. The ability of the electric power to handle large overloads for short periods of time, the author explains, enables it to get heavy-tonnage trains over short grades at comparatively high speeds—and constitutes one of the main advantages of electric traction, where traffic density is sufficient to warrant the necessary capital outlay.

●

PARKING PROBLEM: The monthly magazine of the public roads administration for July contains an analysis of the automobile parking problem and suggests, rather surprisingly, that one solution to this menacing problem is the provision of more adequate "mass transportation" facilities. It even goes so far as to give figures showing what an enormous number of expensive roads are required into a city when all of the commuters travel by private automobile, and how fewer such roads are needed if substantial percentages of the travel use common carrier facilities.

EQUIPMENT BOOM: Up to the end of July the railroads had, this year, ordered 858 locomotives, almost 103,000 freight cars, and 616 passenger cars. In the case of locomotives and freight cars the seven months' totals already exceed those of any full year since 1929. There was some slowing down in new freight car orders in July, compared with preceding months—doubtless because the manufacturers are already booked to capacity for months ahead.

●

DITCH GYP PROGRESS: The hearings on the St. Lawrence Seaway project have closed, with the proponents planning to include the scheme in the "omnibus" rivers and harbors bill—so the individual legislators cannot vote against this plan without at the same time vetoing the dredging to be done in their own local creeks. Nobody who has taken the trouble to examine this measure fails to recognize that it has only two primary purposes (1) the granting of subsidies to favored shippers and (2) the further socialization of the country. The other claims—such as national defense—made in its behalf are nothing but political trickery, as those who utter them well realize. The legislative devices employed to put the bill over—first, the failure to deal with it as a treaty, which it is, requiring a ⅔ majority vote in the Senate; and, now, incorporating the scheme in the "omnibus" rivers bill—are a further measure of the ethical and political standards of the bill's proponents. Such is the quality of the intellectual and moral leadership of a nation which presumes to tell other countries and continents what is right and wrong.

●

LABOR & FREIGHT RATES: While railway managements are under chastisement by Mr. D. B. Robertson because of their alleged "short-sightedness" and "senility," our observer on the competitive rate situation in his article this week takes a look at the economic statesmanship of the railway labor leaders. Because of the recent rise in railroad traffic and earnings, our observer points out, the carriers now have a unique opportunity to correct their competitive rate structure in order to assure themselves of a fair share of the nation's traffic when the defense boom ends. Such a step would be directly in the interest both of protecting future railroad employment and the solvency of the pension fund. But the unions, by their extortionate wage demands are trying to take away from the carriers the opportunity thus to safeguard post-war railroad jobs. Seems kind of glass-housy for fellows acting like this to be calling other people "short-sighted" and "senile."

●

THOUGHT FOR THE WEEK: There may be grounds which permit honest people to disagree over what the rate of railroad wages or earnings ought to be, but there are no such grounds for disagreeing over what present wages and earnings actually are. Disagreement over such facts signalizes lack of candor, not to use a harsher term.

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The Week at a Glance

ABC FOR DBR: Anybody, even a child, if he stops to think, knows that it takes "capital" to make jobs on a railroad—or in any other business. Where does this money come from? Obviously, it is the stockholders who supply it—either out of their own pockets or by borrowing. *Why* do stockholders thus put up money? They do so because they believe they will derive an income from it. And what happens if they *fail* to get an income? They quit putting up money. And then what happens to the jobs which can only be kept going if "capital" is forthcoming to maintain them? They fade away. These are the plain and simple facts which wreck Mr. D. B. Robertson's sly casuistry, attempting to justify high wages accompanied by chronic starvation of railway stockholders. As the leading editorial herein makes clear—the course advocated by Mr. Robertson leads inevitably to the destruction of railroad jobs by the abolition of the capital which sustains them.

●

OPACS MUSCLES IN: Unmindful of the fact that the I. C. C. is the government's regularly-constituted agency for passing upon the reasonableness of freight rates, the Price Commissars (OPACS) have barged into the picture to push down railroad rates on iron and steel moving to the West Coast. The amiable Dr. G. Lloyd Wilson is the OPACS official upon whom this task has devolved—which doesn't make it any less an usurpation by an ambitious and upstart agency of functions lodged in experienced and responsible hands elsewhere.

●

TRANSPORT BOARD: Well, the Senate has confirmed the Transport Study Board—just about ten months after the bill calling for its establishment was signed by the President. Clyde Reed, who has closer knowledge of transportation than any other Senator on the sub-committee which passed upon the nominees, said what a lot of people are thinking when he remarked that "if fully informed, the President has not handled this question in line with the purpose of the law." What he had reference to was the appointment of such a vociferous partisan as C. E. Childe to the Board, where he will now have the power "to sit in judgment in his own cause." However, advocates have been known before who, in ascending the bench, have left their advocacy behind—an achievement not impossible to a man of true magnanimity. Mr. Childe has a rare opportunity to demonstrate this quality if, as is to be hoped, he has it in him.

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WHO ASKS SACRIFICES?: Shortages of all kinds of goods which good Americans want to use are beginning to be felt, with far tougher ones in the offing. But—if the waterway strategists succeed in their latest subterfuge—labor and materials by the billions are to be squandered on such useless (and ultimately job-destructive) public works as the St. Lawrence and Florida canals; to say nothing of war materials to help one bloody dictator who has friends in Washington defend himself against another who hasn't. It is no wonder that the common people along the Eastern Seaboard have responded to Secretary Ickes' demand that they use less gasoline by buying more than ever. The fellows who ask sacrifices by others usually have—and deserve—little luck while they set the example of satisfying every extravagant whim of their own.

●

REAL REASON FOR DITCH: Some people who know transportation are mystified at the vigor and determination shown by New Deal adherents of the St. Lawrence seaway—when no sane and disinterested person has ever been able to discover that a single one of the alleged "advantages" of the project has any existence in fact. If the scheme has no merit, then why are the New Dealers for it? A bulletin issued by the Transportation Association clears up this mystery—if mystery it is. The purpose of the seaway is to undermine private investment in power and transportation by depriving them of income—and thus to socialize these industries. And that would solve the future employment problem of the hordes of New Deal appointees now infesting Washington.

●

A. A. R. "OPEN" MEETING: The A. A. R. is going to have another "open" meeting on November 12-13 in Chicago—like the one it had in New York last year, which was so successful. The NIT League and the R. B. A. will be meeting there at the same time, as they were in New York last year. It is expected that both Ralph Budd and Joseph B. Eastman will be on hand to address the Chicago meeting.

●

DELTA EAGLE DOES WELL: In its round-trip over the 259-mile route between Memphis and Talullah, La., the Missouri Pacific's "Delta Eagle" brings fast and luxurious service to an area which, heretofore, was largely without any common carrier service at all—either by rail or highway. An article herein describes the territory and the way the train fits into it, and reports that patronage already secured makes the venture "no longer an experiment."

●

"AFTER US THE DELUGE"?: The New York Herald-Tribune points out that "railroad wages frequently go up but rarely if ever go down." It goes on to suggest what awaits the railroads after the defense boom "when an overbuilt transportation system—including railroads, pipelines, waterways and motor trucks" go to competing for "a sharply reduced volume of business." What will then become of the railroads if their costs of operation are skyrocketed by wages "frozen at the new and higher levels"? What, it might likewise be asked, becomes of railroad jobs when railroad costs are so high that they do not permit the roads to bid for competitive traffic? How much statesmanship (i. e., foresight) is being shown by the leaders of the labor organizations?

WOOD TREATMENT PROGRESS: The volume of wood preservation done in 1940 exceeded that of 1939 by better than 8 per cent—and was 73 per cent of the 1929 volume, which was the biggest year in history. Details of the year's development in this industry—so largely dependent on the carriers as its largest customer—are given in an article elsewhere in these pages.

●

6-COUPLED POWER: The development by the New York Central of locomotives with 6-coupled drivers is reviewed in a paper herein by P. W. Kiefer, chief of motive power of the system. In particular, the improvement in performance of more recent units of this characteristic class of locomotives is examined—revealing the design and construction changes which have brought this improvement.

●

A REAL DEMOCRAT?: Governor Edison of New Jersey appears to be one of the dwindling number of Democrats who still cling to some of the fundamentals of the party's traditional faith. A few weeks ago he courageously risked his political neck in a battle with Boss Hague, of his own party, by modifying to some degree Jersey's fantastic railroad taxes. During the course of his fracas with Hague, he let go a reference to "glittering superhighways," which suggested his lack of enthusiasm for such un-Democratic structures. Now he has sought to intervene in a shipbuilding strike in which the Navy had been asked to take over. "When labor and capital complacently encourage the government to take over industrial plants," says Governor Edison, "they are contributing to the creation of a system which will destroy the very freedom we are arming ourselves to preserve."

●

THOUGHT FOR THE WEEK: How many people understand the basic difference between interest and profits, in the several senses in which these words may be used? Interest is the "subsistence wage" of "capital," which *has* to be paid (under government as well as private ownership) or else new money won't be supplied to keep an enterprise going. The net earnings of the railroads in the past ten years have averaged less than 2 per cent on the total investment. Such a figure is not even bare interest—let alone any "profits." That is, "capital" on the railroads, on the average, has not been getting subsistence pay; and even this bread-and-water diet has been, and continues to be, insecure. So new "capital" forsakes the railroads and goes into superhighways and waterways where the "wages" are better, and (thanks to the taxpayers) more certain. It takes "capital" to make jobs. Is it any wonder that railroad jobs (except for the war boom) are drying up, while those of rival transportation agencies—which give "capital" three squares a day—steadily mount? Whose duty is it to explain this important fact to employees?

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The Week at a Glance

FDR & TRANSPORTATION: About three years ago, the President appointed a hand-picked New Deal "fact-finding" board to agree with him that railroad wages ought not be reduced. To soften the blow on the railroads, both he and his "fact-finders" suggested that management and unions ought to get together in a constructive program for correcting the political handicaps under which the railroads are laboring; and he promised to support legislation to this end. He even appointed the "Committee of Six" to recommend what ought to be done. And then, he washed his hands of the whole business. The "Six Committee" made its report, but the President did not so much as lift a finger to secure the adoption of its program.

●

CONSCIENTIOUS CONGRESS: Congress, however, was not so remiss as the President. Under the guidance of the most responsible and able interstate commerce committees in recent history, Congress labored over and enacted—without any help from the Administration—the Transportation Act of 1940. One of the most important provisions of that Act was that calling for the naming of a transportation board (recommended by the Committee of Six and almost all other expert opinion)—to provide for a more reasonable and economic division of the transportation work of the country among the rival agencies of transportation. The Act became a law eleven months ago—and only now has the transportation board been appointed. And what a board it is!

●

ANOTHER FDR PROMISE: Two of the members of the new board are, apparently, estimable young men of limited experience. The other is a professional railroad baiter and waterway propagandist. As the leading editorial herein points out—unless a miracle happens and these members chin themselves up to a stature none has yet attained, then the best that can be hoped from this board is "just another report." At worst—if the railroad baiter on this board can prevail over either of his colleagues—what we may very well get is a bitter anti-railroad document, issued under the guise of official "impartiality." The bible says that even a sinful man, if asked for a fish, will not give his petitioner a serpent.

●

"YOU CAN'T DO BUSINESS . . .": Mr. Roosevelt promised the railroads and their employees a reasonable solution to their unfavorable political status. He promised this first back in 1932 in his Salt Lake City speech, when he was first running for office. He promised it again and more specifically when he appointed the Committee of Six in 1938. Actually, what he has given them has been his hypocritical St. Lawrence Seaway project and his half-hearted (and, in one case, actively offensive) nominations to the transportation board. And, they tell us, "You can't do business with Hitler" because, it seems, you can't count on the fellow's promises. Looks like this country ought to develop its domestic supply of civic virtue a little before we go exporting this commodity, at the point of a gun, to an unwilling Europe and Asia.

●

"THE PROSPECTORS": One of the D. & R. G. W.'s novel 2-car Diesel streamliners, soon to be put into operation between Denver and Salt Lake, got a trial run in Eastern territory this week for the benefit of the press. And they were favorably and fully pictured and described by the newspapers represented. The road brought a genuine bewhiskered "prospector" east to serve as "guide" for the train's westward journey and some of the reporters seemed disposed, at first, to question the old gentleman's *bona fides;* but not after they had inspected at close range his artistry with a chew of tobacco. It is a technique unknown in the decadent East.

●

ICC ON TRUCK SIZE: Swayed, apparently, by the heavy, continuous and skillful "trade barriers" barrage, the I. C. C. has recommended that the federal government invade the field of regulating sizes and weights of motor vehicles. The commission doesn't have in mind establishing uniform standards for the whole country, but thinks it ought to have the power to remove "unreasonable obstructions" to interstate commerce. The states build the highways, and have to repair them when heavy trucks tear them to pieces, but the power to prevent the abuse of its own property is one with which the states cannot be trusted.

●

TRUCKS TO SAVE CARS: If the Illinois Central is permitted to establish the co-ordinated rail and truck service for which its applications are now pending it will save approximately 110 freight cars *per day.* Moreover, as the article herein describing the proposed operation indicates, the new service will cut from one to two days off the time that freight is in transit. The plan, which is simply an extension of a project in which the I. C. has already for some time been engaged, involves the concentration of L. C. L. traffic at central points with local distribution by truck—thereby saving money, saving time, saving cars and increasing traffic.

●

WPA FOREVER?: The Mayor of New York, who is an inside New Dealer, in a speech this week predicted "a new order" in this country following the present crisis. We are going to keep on spending tax money, he said, for *highways,* hospitals, schools, and so on at the same rate that we are now spending money for defense projects. Such continued spending, of course, would tax private property right out of private ownership which, doubtless, is exactly what Mr. LaGuardia has in mind. Anyhow, nobody can complain that these fellows haven't given plenty of warning what their intentions are. It is a "new order" similar to that now bestowing its blessings on the continent of Europe. With all property and power under control of the politicians, and which, so long as it is European, we are supposed to hate.

WELDED RAIL: Seven years experience with long lengths of welded rail have given the D. & H. an opportunity to make comparative cost studies between track so equipped and that having standard angle-barred rail. A paper herein by the D. & H.'s chief engineer gives the result of that experience.

●

DITCH FIGHT CONTINUES: Tom McGrath, who heads the conference of interests opposed to the St. Lawrence Seaway, has urged opponents of this project to continue their fight against it. The inclusion of this scheme in the omnibus rivers and harbors bill, at the request of the President, he terms "shocking and unprecedented." Shocking it is indeed—but scarcely unprecedented. By handling this project as a regular act of Congress, instead of as a treaty with a foreign power—which it is—the President had already given notice of his respect for precedents, when they stand in the way of his ambitions.

●

TWO NEW "CITIES": A new outfit for the "City of San Francisco" and another for the "City of Los Angeles" have been placed in operation—giving service every third day between Chicago and the two Pacific Coast termini by these famous streamliners. The equipment of the new trains is described and illustrated in an article elsewhere herein.

●

WAGES GEARED TO C. OF L.: While the leaders of organized railway employees south of the border are trying to use the national emergency as a means of effecting a huge increase in their wages, it is to be noted, by contrast, that in Canada the unions are content to assure their members against hardship from a rising cost of living. Wages will go up automatically as the cost of living increases and they will go down, just as automatically, when the emergency ends and the cost of living declines. Thus it will be possible for the Canadian railways to protect the jobs of a maximum number of men at a time when a job, and not high wages, will be every man's primary concern.

●

THOUGHT FOR THE WEEK: In our "boxes" on competitive rate-making, we have assumed, on what appears to be persuasive evidence, that so much traffic has been lost to competitors, that rates made to recover this traffic would bring in more than sufficient new revenue to offset losses in rate reductions on traffic still moving by rail. Now, however, comes a communication (published herein) from the Distributors' Transportation League—contending that rate reductions cannot be made on high-rated traffic without compensatory increases on low-rated commodities. Who is right? Can anybody be sure, without a pretty exhaustive statistical study? Whose job is it to make such a study—or answer the question conclusively without it? There isn't any more important question bearing on the future of the railroads than this, is there?

SELF-ALIGNING TRUCK

THEY present a standard balanced arrangement on a large one-level spring seat. Because of their accessibility, changing the springs is easy and simple.

Accessibility applies to shimming, too . . . a simple rectangular shim can be slipped in above each top spring plate when necessary.

Quick inspection is another advantage that arises from the standard spring and bolster arrangement of the Self-Aligning Truck.

OVER 80,000 CAR SETS OF SELF-ALIGNING TRUCKS HAVE BEEN ORDERED

AMERICAN STEEL FOUNDRIES

The Week at a Glance

TONS AND TON-MILES: The railroads aren't getting anything like the amount of traffic (carloads) that they got back in '29—but the amount of freight *movement* (ton-miles) is now running at the highest level in history. This distinction is made clear in the leading editorial herein, which has a chart showing carloadings and ton-miles in percentages of 1926. In May, 1941, carloadings were only 82 per cent of the total for May, 1926, but *revenue ton-miles were 111 per cent of those of May, 1926.*

●

HOW SHARE EARNINGS?: In the past ten years, railroad earnings per share of stock have been 87 per cent less than in the 1908-17 decade—*while earnings per employee have been 115 per cent greater.* Even if there were no wage increase, railroad stock this year has been earning at the rate of only about $6.25, which is less than the annual per share earning in the ten years prior to the last war. The leading editorial herein suggests that stock earnings ought to be allowed to catch up to a decent average. The average employee did not share deeply in the adversity of the 'Thirties. What moral or economic claim has he to a share in the present alleged "prosperity"—at least, until the stockholders get caught up on their deficiencies?

●

TRANSPORT BOARD IS IN: The Transportation Study Board—Dr. Smith and Messrs. Webb and Childe—has been sworn in and is now looking around for office space and considering the employment of a staff. Well, boys, we hope you realize how much the future welfare of the whole country (not just some pet interests in the Missouri Valley, Mr. Childe) depends upon your concept of your responsibility, and the character and intelligence which you can summon to your assistance.

●

DOMESTIC FUEHRERS: Well, a ship yard refuses to fire its help who won't pay their union dues—so the government seizes the ship yard. And we are all supposed to be very enthusiastic for freeing Europe and Asia of the curse of governments which ruthlessly push people around. Our national unity bogs down because our leaders are much too guilty, themselves, of the faults in foreigners against which they strive to arouse our anger. Matthew 7, 3 still holds.

●

RRS. AND THE TAX BILL: R. V. Fletcher, representing the railroads, made a strong and apparently convincing case to the Senate Finance Committee against the proposed "super" levy of 10 per cent on the increased incomes of corporations paying taxes on the basis of invested capital. At any rate, the committee appears to have accepted his presentation, because it wiped out the proposed tax. The railroads made next to nothing in the depression years—and the 10 per cent levy was an attempt to put a penalty impost on their present modest earnings under the theory that, somehow, such earnings constitute "excess profits." However one may despair of the administrative branch of the government and the horde of unprincipled incompetents which it has brought to Washington, there still exists a bed-rock of competence and integrity at the other end of the capital, as this decision shows.

●

CANADIAN WAGES SETTLED: The railway unions in Canada are not trying to use their country's peril as an occasion for high-jacking large wage increases for themselves. They will, instead, receive automatically, as a bonus, $1.25 a week for each 5 points that the cost-of-living index exceeds that of August, 1939. Details of this settlement are given in the news pages herein.

●

P. & S. IN CRISIS TIME: For one thing the B. & M. is keeping a close check on the time it is taking to get deliveries on various classes of materials, and is changing the tempo of its purchasing program to fit. This and other expedients which the road is adopting to gear its purchasing program to the necessities of the present emergency are described in an article in this issue.

●

LOCO. DRAFT CONTROL: Excessive draft induced when locomotives are worked at or near capacity is believed to be an important source of fuel waste, and to involve other difficulties—cinder cutting, for instance, and excessive smoke. A device for controlling draft automatically has received extensive tests on the Lehigh Valley, which are described herein. A material saving in fuel consumption is noted.

●

TRANSPORT CRACK-UP?: The program of freight car construction is moving along at only about half the speed necessary to give the railroads the 1,800,000 cars they plan to have by October, 1942. So Ralph Budd told the Public Utilities Commissioners in St. Paul this week. It is the government's failure to get the car builders the materials they need which is causing the slow-down and, unless it is remedied quickly, the roads are going to be 100,000 cars shy of their October, 1942, goal.

●

RIO GRANDE NARROW-GAGE: The I. C. C. has given the D. & R. G. W. authority to abandon its narrow-gage line extending from Colorado into New Mexico, this being the case where a few senators barged in and attempted to assume jurisdiction, cats-pawing for the Dear Sirs and Brothers. The theory activating these objectors is that the railroads should be operated to provide jobs and to give service, even when there is very little demand for the latter. The idea that an invested dollar is entitled to wages doesn't enter the calculation—although the Sirs and Brothers themselves don't seem to be eager to invest their money in such properties.

AIRLINES USE S.A.: The alert airlines are beginning to use personable young ladies as traffic solicitors, according to "Business Week." The talent selected for these jobs, besides being comely, must have a college education and be from 22 to 30 years of age. The solicitors-to-be are given six months' training—in plane operation, public speaking and fashion information—and are then turned loose on the prospects; not only individuals, but luncheon groups and other gatherings of men calculated to be particularly susceptible to this type of sales argument.

●

TIE STUDY: Results of the Burlington's long-range study of tie life are revealed in an article elsewhere herein. Seven per cent of ties installed in test tracks 31 years ago are still in service.

●

MORE "UMBRELLA" RATES: The Commission has issued another one of its "umbrella" decisions—now becoming habitual—on competitive rates on petroleum products. The railroads are required to boost their rates to a level far above a fully-compensatory basis—just so both railroad and truck rates are made equal at an artificial level high enough to enable the trucks to stay in business. This line of I. C. C. action is establishing by government coercion, and to the public detriment, a monopoly condition where competition is the *natural* situation—thus reversing the whole theory of regulation, which was originally intended to retain the advantages of competition to the public under conditions of *natural* monopoly.

●

PENSION TAXES: The retirement Board has issued a statement, clucking contentedly over an increase of 16 million dollars in pension tax collections in fiscal year 1941 as compared with fiscal '40. Better railroad business and more jobs is what did it, and the increase is welcome because actuaries have viewed the pension fund with alarm and expressed doubts that the present rate of pension taxes would keep it solvent. A great deal depends on the degree of railroad prosperity. The unioneers who are now trying to give carriers a wage basis which would wreck their post-war employing power are, in effect, assiduously cutting the ground right from under their own prospective pensions.

●

THOUGHT FOR THE WEEK: Truck loadings in July were almost 36 per cent above those of July, a year ago. Carloadings on the railroads were up about 21 per cent. We know that the railroad increase was, pretty much, defense traffic—which will vanish with the wind when peace comes. But how about the 36 per cent increase in truck tonnage? Is that all defense business too—or is it not, perhaps, in large part, consumers' goods, which the trucks are taking away from us *painlessly now,* but the loss of which will be doubly hard to take when the war is over? Who knows? Whose business is it to find out?

EMC DIESELS

PUT new life in rail transportation by providing safer, faster, smoother, cleaner, quieter—more economical operation in all classes of service—Switching—Transfer—Freight and Passenger.

ELECTRO-MOTIVE CORPORATION
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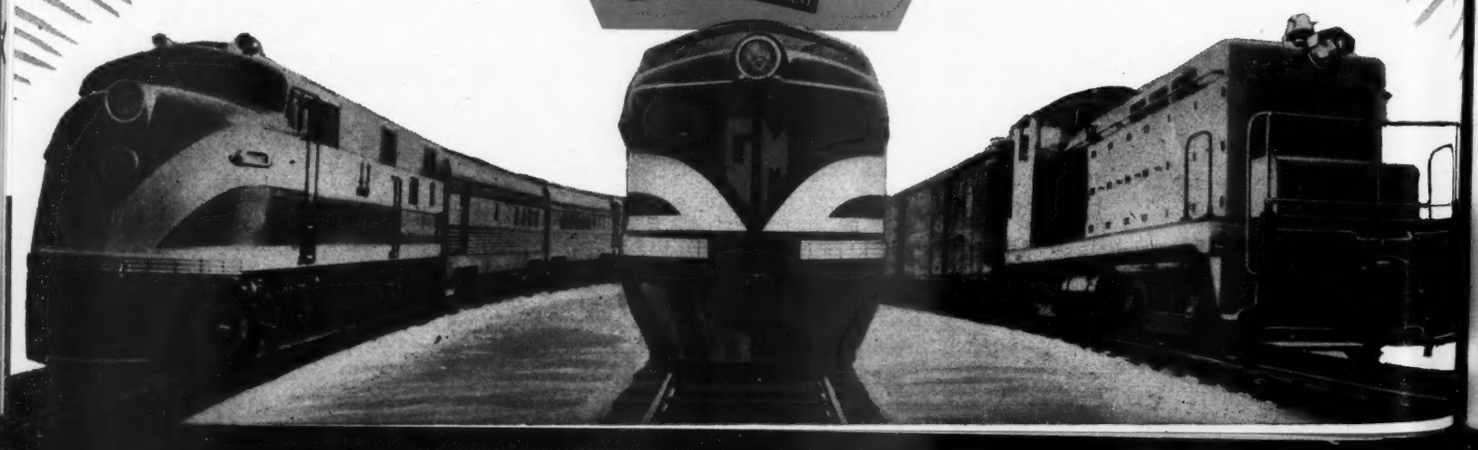
GENERAL MOTORS LOCOMOTIVES



The Week at a Glance

HANK WALLACE, SATRAP: Vice-President Henry Wallace — star-gazing mystic, railroad-baiter, aspirant to the Spanish language, and Biblical student who seems to fancy himself in the role of Joseph at the court of a modern Pharaoh—has been named to head a superior priorities board, known as SPAB. There are six other members on the board, only two of them (Knox and Knudsen) with executive experience in industry. The others are an elder statesman (War Secretary Stimson), a labor leader (Sidney Hillman), a New Deal statistics juggler (Leon Henderson), and a social service worker (Harry Hopkins). Donald Nelson will serve the board as executive director.

●

"GRAND CIRCLE" CONTINUED: The reduced "grand circle" railroad fares, by which the customer may swing all away across the continent and back for only $90 (in coaches—$135 plus $45 for a Pullman lower) are to be continued indefinitely. Established experimentally in 1939, these popular rates have since been continued from year to year; and are now to be kept going "until further notice."

●

PHONEY "GAS" CRISIS: "The eastern seaboard's gasoline crisis has showered" many benefits on the big oil companies—such is the conclusion of a feature writer, Guy Richards, in a series of three articles in the New York Daily News. The crisis has been an excuse, enabling the big fellows to go farther with their "integration" — for example, controlling their own transportation to an even larger degree; and getting authority to build pipelines which they never would have secured under normal conditions. "Thus," Author Richards concludes, "through the 'sacrifice' of a few tankers and a few months' debate, the oil companies have won a concession to extend one of the most profitable parts of their integration." Not only that, but they have also been able to boost their prices. J. J. Pelley, as reported in the news pages herein, has also shed light on this alleged gas shortage.

●

STATE COMMISSION MEET: The railroad and utilities commissioners had their annual meeting last week, and the report thereof is printed in this issue. Ralph Budd impressed the delegates with the seriousness of the transportation situation the country faces (part of this speech we reported last week). The commissioners went on record as opposing the I. C. C.'s "unwarranted interference" with state control over motor vehicle weights and sizes. (Yoo-hoo, A. T. A., Dept. of Commerce and all the rest of you "trade barrier" buncombe artists.) On the other hand, the commissioners have fallen for the "reciprocity" gag of the truck crowd—while they deplore the basing of truck rates on rail classifications.

●

SANTA FE CURVES: Curve reduction on the Santa Fe's Chicago-Kansas City line—undertaken to smooth the way of streamliners over this route—is described in an article herein. But it isn't only the streamliners that have benefited from these changes; acceleration of merchandise trains has also been made easier thereby. Maximum curvature of 1 deg. 30 min. has been established, but curves *within* this limit have also been eased up where the cost was reasonable. Interesting methods were employed in doing the job—which was largely motorized.

●

GAS RATES IN S. W.: Our scout on the competitive rates front, in his report this week, gets into the I. C. C. decision requiring Southwestern carriers to boost their gas rates to provide an "umbrella" so that trucks can come in and take away the business. The excuse offered for this decision was the failure of the roads to proffer cost evidence but, as our scout reminds us, the Commission isn't so particular when the trucks want to put in backhaul rates: and it wasn't so exacting, either, when it took it into its head to reduce passenger fares in the East.

●

TRANSPORT BOARD CALIBER: General Hugh Johnson animadverted in his daily column on August 30 on the personnel of the new Transport Board. He contrasted the comparative obscurity of these worthies with the National Transportation Committee (1932) which, though formed under private auspices, was nevertheless able to command the services of a former President of the U. S. (Coolidge), and such outstanding citizens as Al Smith, Clark Howell, Barney Baruch and Alexander Legge. Said General Johnson: "For a national advisory board's findings to carry authority and conviction, its members should be men of something approaching national stature and some greater distinction than local office-holding, kindness to their families and love for their mothers."

●

HONEST WAGE FIGURES: The I. C. C. has issued a statement clarifying its wage statistics, showing how they differ from those of the Retirement Board which are being dishonestly used by union leaders to fool the public into thinking that the average man working on the railroads gets $500 less a year than he does. If a man works throughout the year on the railroads, his average pay, as the I. C. C. clearly demonstrates, is well above $1800. The commission statement is reviewed in the news pages herein.

●

YANKEE TRUCK RATES: Attacks by the "pick and choose" school of truck rate-making on the New England basis of truck rates (costs reflecting the "inherent economies" of truck service) get scant sympathy from the examiner's report which, very largely, supports the existing rate basis. The New England railroads entered the case, but did not take sides in behalf, either of defenders of the existing type of rates, or the attackers—who want to adopt railroad classifications and thus "umbrella" the truck rates up to the railroad level; thereby facilitating the "pick and choose" process.

FRT. OR PSGR. LOCOS.: Recent New York Central experience in pioneering locomotive development is discussed by P. W. Kiefer, chief engineer m. p. and r. s., in the concluding installment, published herein, of his recent A. S. M. E. paper on this subject. Particularly, Mr. Kiefer relates the Central's interesting problem arising from the necessity of having freight power which, in a pinch, can perform satisfactorily in the road's exacting passenger service; and how it has coped with this job.

●

MANAGERS' REVOLUTION: A book entitled "The Managerial Revolution" has been recently published, and has caught the attention of thoughtful people all over the country—railroad men included. What the author contends is that owners (i. e., stockholders) have largely abdicated the task of managing business and have turned the job over to hired managers; and that these managers are running business with little or no regard to the interests of the owners; and that this disregard of owners is leading to government ownership. Furthermore, under government ownership, business is not run for the benefit of the public, but primarily for that of the bureaucrats in charge. This is what has happened already in Russia, in Italy and in Germany and—as the author conclusively demonstrates—is also happening in the U. S. A. under the New Deal. The author claims that this development is inevitable, but our editorial shows that it is nothing of the kind.

●

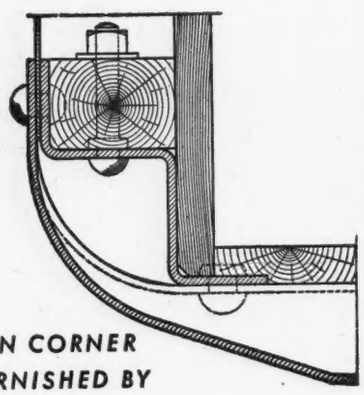
FDR & FREEDOM: "The rights of free labor . . . could not exist without the rights of free enterprise"—so said President Roosevelt, with great truth, in his Labor Day speech. But such general principles, however noble and valid, are not worth much if they are not put into practice. The St. Lawrence waterway is *not* free enterprise—because free enterprise means that people pay for what they want; whereas in the case of the St. Lawrence millions of Americans are to be forced by the tax-collectors to pay for water transportation that they do *not* want. The New Deal is busy as a bee-hive destroying free enterprise in this country—by competing with it socialistically and unfairly, by taxing and regulating it to death, and by withdrawing protection of its property from mob violence.

●

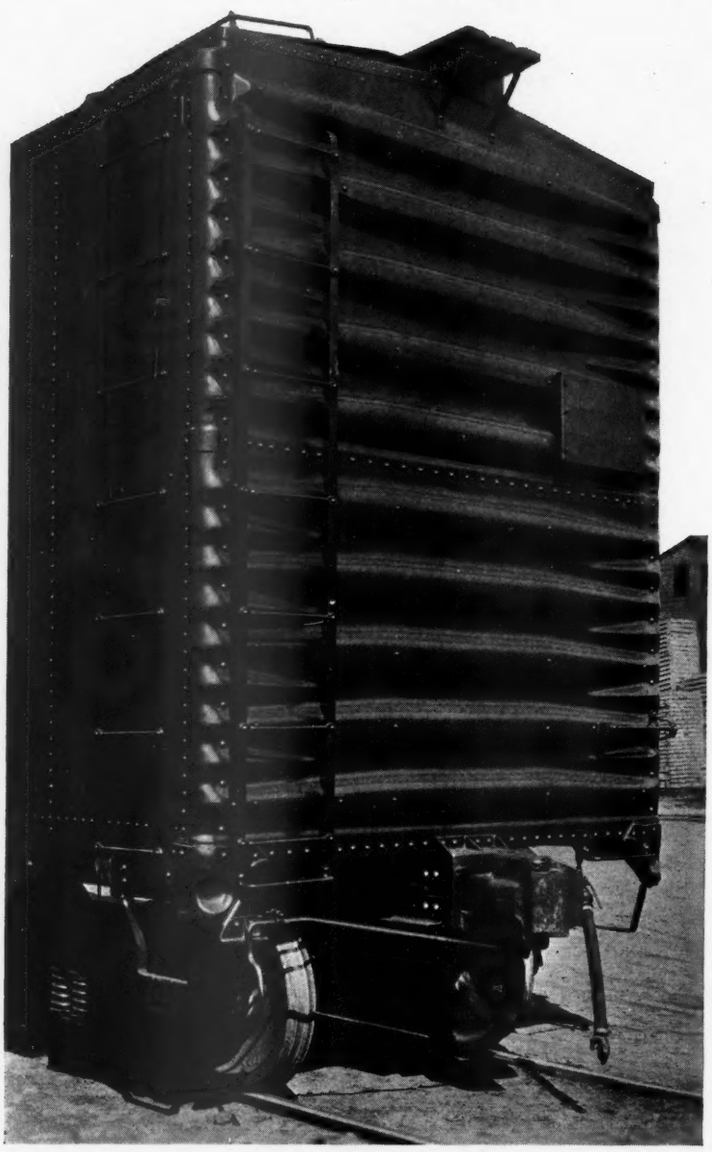
THOUGHT FOR THE WEEK: A strike vote taken by the railway union is, actually, a vote of confidence in their leaders and the election machinery is in their hands. How many national or state elections would go against the party in power if that party had exclusive control of the election machinery and counted all the ballots; and, especially, if the party in power was the one which controlled the wording of the ballots and had a monopoly of all electioneering? How democratic would the country be with such election practices? How democratic are the unions?

Round Corner
DREADNAUGHT ENDS

PROVIDE 25% INCREASED STRENGTH WHEN USED IN COMBINATION WITH W-SECTION CORNER POSTS



W-SECTION CORNER POSTS FURNISHED BY BUILDER.



CARRY STRESSES TO CORNER POSTS

RESILIENT STRENGTH TO PROTECT CAR AND LADING.

STANDARD RAILWAY EQUIPMENT MFG. COMPANY

HAMMOND, INDIANA

WORKS: HAMMOND, INDIANA NEW KENSINGTON, PA. WARREN, OHIO

CHICAGO OFFICE — 310 S. MICHIGAN AVE.

The Week at a Glance

LOOK THE BOARD OVER: By naming on the "Emergency Board" to report on the wage controversy a majority of persons who have held office under the New Deal, the President undoubtedly expects that the findings of this Board will reflect Administration policies. As the leading editorial herein points out, the report of this Board will reveal, more than mere words possibly could, what the Administration's *real* policy is, for instance, on price inflation. Large, indiscriminate, and unconditional wage advances would inevitably have an inflationary effect—and, if they were granted without compensatory rate increases, would seriously threaten both private ownership of the railways and the carriers' ability to finance needed improvements. This Administration has fooled a lot of people with its *words*. It has never fooled anybody who carefully examined its *deeds*.

●

FAKE SHORTAGES: Well, the alleged "gasoline shortage" in the East has blown up in the face of the Secretary of the Interior who, along with other New Dealers, apparently conceived of this "shortage" as a justification for transferring increased economic power to government officials. And now they are talking about a "transportation shortage"—but, as the leading editorial herein demonstrates, there won't be any, unless the government denies rolling stock manufacturers the materials they need, and throws them away on pipelines, St. Lawrence canals and other boondoggling socialistic projects.

●

RRS NEED MONEY: While the New Deal sand-throwers in the journal bearings of free enterprise are professing to know so much more than railroad men do about the needs of the railroads for rolling stock, these same "experts" are ignoring the fact that railroads also need lots of money for maintenance of way and structures and for rehabilitation and improvement of railway structures. For technical financial reasons, it happens that the railroads can finance new rolling stock purchases even when their general credit is not of the best. But they cannot finance adequate maintenance —or structural improvements—out of anything except reasonable net earnings, and credit which is dependent upon such earnings. The report of the "emergency board" will reveal whether the Administration proposes to allow the railroads to provide for adequate roadway and structures over which to haul their increasing supply of rolling stock.

●

FASTER TURNS ON CARS: The railroads in June turned the average serviceable freight car from load to load in 12½ days. Vice-President C. H. Buford of the A. A. R. told transportation officers in Chicago last week that this turning time would have to be reduced to 11.8 days this fall, or else the carriers will be 90,000 cars short of handling a peak weekly loading of 960,000 cars. Chairman Kendall of the Car Service Division warned the audience to "police daily the accumulation of cars at industries — particularly at common points where competitive conditions may complicate matters."

●

WAGES IN CANADA & U. S.: By a distinction which is difficult to comprehend, the railway unions turned down an offer by the U. S. railways for a wage increase, fluctuating with the cost of living —a basis which the self-same unions accepted in the case of the Canadian lines.

●

COMPROMISE WITH EVIL?: An "old, old reader" suggests that on this page and elsewhere in the *Railway Age* we should deal more generously with the politicians who, by stealth and while pretending great love for the common folks, are trying to enslave Americans to state socialism. It is true that debate of controversial issues ought to assume honesty and good intentions on the other side where there is the slightest suspicion that such qualities exist. But what is the duty of a self-respecting journalist where, by long study and careful observation, he is convinced to the contrary? Should he share his information with his readers, or encourage them to believe that obvious scalawags and plotters against free institutions are possessed of virtues and intentions of which they are devoid? It was by speaking generously of scoundrels—overlooking the evil in them or ascribing to them noble motives which they claimed but did not possess—that easy-going Europeans lost their political and economic liberty.

●

HIGHER TOURIST RATE: The Pullman Company has secured permission to raise its charge for space in tourist sleepers from 50 per cent of the standard sleeper price to 66⅔ per cent thereof. This will raise the cost of a tourist lower, for instance, from Chicago to San Francisco from $8.95 to $11.05. There is no change in the "intermediate" railroad fare for tourist car travel. The I. C. C. in allowing this increase agreed with the Pullman Company that there was a bigger gap between the prices for standard and tourist space than was warranted by the difference in the service.

●

THE SUPT. & M. OF W.: The superintendent has large opportunities for promoting the efficiency of track maintenance on his division—and nine important steps that he can take to reduce maintenance costs, and improve its quality, are gone into in a report published elsewhere in these pages. Just for instance—consider how roadway work can be facilitated on multiple tracks by the diversion of traffic away from the track upon which work is being done; provided, of course, that such diversion does not entail serious delays to trains.

●

PIPE LINE TURN-DOWN: The 24-in. Texas-New York pipeline, alleged to be needed to relieve the East Coast gasoline "shortage," got turned down on a steel priority—the assumption being that the metal will better serve national defense if it is used for freight cars and ships.

JOBS JUMP SOME MORE: Railroad jobs in mid-August this year went above the 1,200,000 mark, being pretty close to 14 per cent above last year. The biggest proportionate rise over a year ago (better than 17 per cent) was in m. of w. But train and engine service was up almost as much (just shy of 17 per cent).

●

MORE S. S. COACHES: Twenty more stainless steel cars have been delivered to the Santa Fe—for service on "El Capitan," the "San Diegan" and other modern trains of the system, and are described in an illustrated article elsewhere in this issue. Fourteen of the cars are chair cars, two are for mail, three are lounge and observation cars and one is a diner.

●

"THE STATE, THAT'S ME": D. B. Robertson issued to the press over last week-end a second installment of his own "Mein Kampf," fussing away at railroad managements, this publication and such of the rest of the press which refuses to acquiesce in his peculiar and highly self-satisfied opinions. How, this once-amiable labor chief asks one of his newspaper critics, can organized labor be against the government when "we stand for the government and the government stands for us?" That's right, Mr. R., you are standing for the St. Lawrence canal, too, aren't you? You speak intelligently against it, but you tell the politicians who are putting it over that they don't need to pay any attention to your arguments; you boys are going to keep on voting for them just the same.

●

TO "PLAN" OR NOT: "Planning" for transportation (by which the "planners" usually mean either government ownership or something pretty close to it) is being warmly discussed by people outside the transportation business, as a look at the news pages herein will reveal. A New Dealish outfit, known as the National Planning Association, has put out a pamphlet strongly advocating "planning" for transportation under governmental aegis—while the official publication of the U. S. Chamber of Commerce is opposing this type of "planning." What doesn't seem to occur to the "planners" is that the only unplanned and completely chaotic part of the transportation picture today is that part under direct government ownership—waterways, highways, air facilities. These things are being built by independent government agencies which take no thought of each other's existence. Before the government tries "planning" for the railroads, it might first demonstrate its competence by setting in order the transportation plant over which it already has ownership and control.

●

BETTER PHONE SERVICE: Santa Fe offices throughout the system—from Chicago to the Gulf and the Pacific Coast —have been linked by a modern multi-channel carrier-current system for telephone and telegraph communication. The installation is described in an article herein.

Passenger service IS profitable . . . .

WITH EMC DIESELS

MORE than 200 EMC DIESEL PASSENGER units are now operating on 20 railroads . . . piling up over 20,000,000 miles annually with an average availability record of 97 per cent. Every one of these trains is earning a satisfactory profit.

One of the country's outstanding examples of how EMC Diesel locomotives are making passenger service pay is shown in the following figures from the Rock Island's comparative study of two EMC Diesel-powered "Rocky Mountain Rockets" (12 *months'* operation ending June 30, 1941) and two steam trains (12 *months'* operation ending October 31, 1939) operating in the same service between Chicago-Denver and Colorado Springs.

	TOTAL REVENUE*	TOTAL DIRECT EXPENSE**	PROFIT (+) OR LOSS (–)
2 EMC Diesel-powered "Rocky Mountain Rockets"	$1,086,755.00	$573,196.00	(+) $513,559.00
2 steam-powered Trains in Same Service	775,285.00	803,922.00	(–) 28,637.00

*Including mail, express and miscellaneous.
**Including locomotive and car repairs, fuel, water, terminal and trackage expense, and direct loss on dining car service.

ELECTRO-MOTIVE CORPORATION
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Photo by Kaufmann & Fabry

The Week at a Glance

OPM ON CAR SUPPLY: A memorandum circulated around OPM and finally was made public this week which carried the startling prediction that the railroads will have a shortage of 132,000 cars this Fall, and that 370,000 cars will have to be built in the coming year to prevent a shortage in the Fall of 1942. The leading editorial herein is devoted to the critical analysis of this amazing forecast. This OPM scare piece carries a veiled hint that some further governmental intervention into railroad operations might not make the prospects so frightening.

●

LOADINGS LEVEL FALLS: The predicted shortage of 132,000 cars this Fall is based on an estimate that 1941 carloadings will run 27 per cent higher than in 1940. Since loadings in the first eight months were only 18 per cent above those of last year, *loadings in the last four months would have to run 45 per cent ahead of 1940 in order to make this OPM statistical masterpiece come true.* But in recent weeks the loadings increase over last year has been declining instead of rising—having been only 15 per cent in the first two weeks of September.

●

BUT THE ICE IS THIN: The OPM estimator does not stick by his figure of a 27 per cent increase over 1941 in arriving at his conjecture for the Fall peak. He sets it at 1,030,000 cars, which isn't much different from the estimate we ourselves made a few months ago. However, as our editorial points out, changing facts ought also to change estimates, and it does not now look as if 1,000,000 weekly loadings will be surpassed in October this year. But, reckless estimates notwithstanding, the carriers and shippers are skating on pretty thin ice, and the utmost efficiency in the use of existing cars will be needed to prevent some shortage from occurring.

●

1942 ESTIMATES: The OPM prognosticator guesses that the railroads will get 50,000,000 carloads next year—or 38 per cent more than in 1940—and that the Fall peak will rise to 1,140,000. The editorial asks why this "authority's" estimate for 1942 should be given credence when his error for 1941 is demonstrably so great. It is pointed out that many industries are already producing to capacity, and that further defense traffic demands on the railroads will probably be considerably offset by declines in civilian traffic. Also, defense traffic does not show a seasonal peak as civilian traffic does, but is spread more evenly throughout the year. Anyhow, no 300,000 cars can be built in a year—and not even half that many can be built unless the OPM does a better job than it has so far in allocating the necessary materials to the car builders.

●

PSGR. LOCO. MILEAGE: Reliability is the characteristic in the locomotive which enables it to increase its daily and monthly mileage. The improvements in passenger locomotive construction which are giving this greater reliability are canvassed in a paper herein by A. A. Raymond, superintendent of fuel and locomotive performance of the N. Y. C. Specific steps are suggested which, if taken, will maximize locomotive mileage.

●

SIGNS ON CROSSINGS: No more railroad signs on grade crossing structures built with federal funds. Such is the edict of Thomas MacDonald, chief of the Bureau of Public Roads. Mr. MacDonald doesn't object to a dignified little monogram on the work, provided he has a chance to look it over first, but he doesn't want anything around big enough to serve as advertising matter.

●

FIGHTS R. R. SOCIALISM: The N. I. T. League has a special committee to do battle against any attempt to associalize the railroads. It has asked its members for suggestions as to steps the League might take to combat propaganda of an insidious nature designed to advance government ownership. A considerable quantity of such propaganda is stated to have been observed in recent articles in the daily and periodical press.

●

¼ MILLION PENSIONERS: The Railroad Retirement Board this week certified its 250,000th pensioner—a Soo line brakeman at Waupaca, Wis.; and, in celebration thereof, the board's regional director went to Waupaca to present in person the pensioner's first check.

●

OIL DISPUTE CONTINUES: The controversy over the fake oil "shortage" in the East continued to burn brightly in the national capital this week. The big Texas-New York pipeline appears to be definitely out, by action of the Priorities Board, unless the proponents will build it of seamless tubing instead of from pipe made from steel plates. The oil companies do not appear to be satisfied with the liberal reductions in rates granted to them by the railroads. The customer who comes to the carriers only when he is in a jam expects super-favors not demanded by or accorded to the regular clientele.

●

PASSENGER ECONOMY: All through passenger service between Chicago and Florida is to be operated this winter on the three-route stagger plan, which was initiated last winter with the streamlined coach trains. The details of the project are set forth elsewhere herein. In the East, a number of shifts and reductions are to be made in passenger schedules with the end of daylight saving, as is recounted in the news pages in this issue. Greater thrift in the provision of passenger service injures nobody; it merely spends the railroad operating expense dollar where it will do the most good—and, in an industry faced with the difficulties that confront the railroads, thrift with its resources is in the interest of employees, patrons and owners alike. To say nothing of providing equipment where it is needed to keep both military and civilian production going.

CANADA & THE UNIONS: Up till now, in Canada, strikes in industries necessary to the war effort have been outlawed, prior to an investigation and report on the dispute by a "conciliation board" (something like the provisions for settling labor disputes on the railways south of the border). But now, according to a dispatch from Ottawa to the New York Times, a further hindrance has been put in the way of defense strikes, in that they are henceforth illegal even after the "conciliation board" report—unless a *secret ballot* discloses that a majority of the employees involved favor the walk-out. The Dominion government took this action because it found that strikes were being initiated by union leaders alone or by a small minority of employees. Illegal strikers may be fined up to $500 or jailed for a year.

●

HIAWATHAS' BIG AUG.: The Milwaukee's "Hiawathas," with extra sections, carried more customers in August than in any month since these popular trains went into service.

●

"EMERGENCY" MEETING: The "emergency board" held its first session in Chicago this week, and announced that it is asking the President to give it till November 1 to complete its report. Meantime, the board has also taken jurisdiction in the Express Agency wage dispute. Our account of the opening session, on another page herein, sets forth the conflicting claims of counsel for the opposing sides. The union spokesmen seem to put great reliance for proving their case upon the admitted greater unit output per employee (achieved by an increased investment of capital per employee and by constantly-improving technique of management, and not at all by greater efficiency or harder work by the individual employee). Management spokesmen, on the other hand, ask the embarrassing question: "What will become of railroad jobs if, at the end of the defense effort, the railroads are handicapped by high labor costs in meeting greatly increased competition?"

●

WHO THEY ARE: The background of each one of the five members of the "emergency board" is given in an article herein. Noteworthy is the fact that the chairman, Dean Morse, in his dealing with maritime labor troubles on the Pacific Coast, appears to have given satisfaction to both unions and employers. Also, perhaps, of some interest is Member Thompson's previous "emergency board" experience in which he joined in a strong statement to the effect that these disputes ought not be allowed to go to "emergency boards;" that they ought to be settled by arbitration. That is just the advice which the railroads tried to follow in this case—but, as usual, without success. And so it will likely continue to be as long as the unions are given reason to believe that the personnel of "emergency boards" is more likely than arbitrators to be inclined their way.

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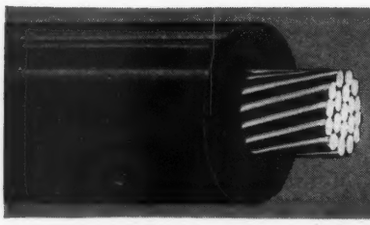

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INSULATED WIRES AND CABLES

The Week at a Glance

THIS WAR IS DIFFERENT: The President of the United States when last we fought a war had not been pursuing policies designed to promote state socialism. There were no plans in 1917-18, as there are now, for continuing huge government spending after the war ceased. The government, prior to the last war, had not been spending money extravagantly for eight years; there was no top-heavy national debt. This war is more mechanical than the last, and hence more new inventions and new plants calculated to alter radically the peace-time flow of traffic may be expected from it. These are a few of the reasons cited in the leading editorial herein why railroad policy-makers need to explore with accuracy and completeness the probabilities which lie before them, so that revolutionary facts may be met with plans based on adequate foreknowledge.

●

WHAT IS GOING TO HAPPEN?: The leading editorial herein advances further the discussion of the question of the quality and quantity of railroad research into economic problems—initiated in these pages by the anonymous memorandum from a railroad statistician, which was published in our September 13 issue. The editorial concludes that the major objective of the kind of research most needed should be the protection and increase of gross revenues rather than the reduction of expenses. Not that the latter is less important, but it has received a great deal of effective attention already—while the former has been only lightly touched. The suggestion is made also that research into the question of gross revenues, probably, needs to be carried on by individual carriers, rather than as a co-operative enterprise.

●

ERIE FINANCING: The Erie's carrying through a financing operation (not equipment) by the unusual expedient of competitive bidding is concisely reported in the financial columns of the news section herein. Also of significance in this novel transaction is the provision made by the underwriters for sale of the issue to large purchasers at a different price from that established for smaller participants.

●

THROTTLING THE DIESEL: "The handling of the throttle of the Diesel-electric locomotive compares in no way with the handling of the steam locomotive's throttle. It is in this that the electric equipment can be subjected to severe abuse and high maintenance costs." This is one of the many points on the road foreman's job with Diesel power discussed in a paper by General Mechanical Instructor Quarles of the Atlantic Coast Line, and published herein with the proceedings of this week's meeting of the locomotive supervisors.

●

CARS WITH CO. MATL.: Maintenance department officers were urged to go easy on work trains and in tying up cars with company material—the admonition coming from Vice-President Buford of the A. A. R. at the roadmasters' meeting, reported herein. Detention of cars with company material, while it has been drastically reduced, is still much too high, and, Mr. Buford told his hearers, "You men here today are responsible for a lot of it." Chief Engineer Kulp of the C. & N. W. dealt with the same subject in his address to the maintenance men, and said that the railroads have a job on their hands to equal the unloading speed attained on government work.

●

ARMY TRACKAGE: The government had defense projects under way on August 1 this year, entailing the construction of 1,256 miles of track—and new contracts in the Ordnance Department alone call for 1,356 more track-miles. Such was the revelation of Colonel L. R. Groves of the Army's Constructions Division in his address to the roadmasters, reported elsewhere in these pages.

●

"COAL EQUIVALENT": How to compare the fuel performance of electric and oil-burning locomotives with those using coal received further discussion in a committee report to the Locomotive Supervisory Officers, abstracted elsewhere in these pages. Different formulas for reducing different fuels to comparable units are discussed. The committee concludes that no one arbitrary standard can be used for the entire country, but that "there is no reasonable justification for the extreme variation in values that the present reports show."

●

TRANSPORT BOARD REPORT: The Smith-Webb-Childe board has made its first report to the President. For one thing, it warns that it is going to put the bite on Congress for more money. Then it states its intention of using the material already collected on transportation by other government agencies. Look it over, boys, but don't think it is gospel just because it bears the imprint of the Government Printing Office. There are government agencies that have been known to be just slightly prejudiced on the transportation question. And not all of the "experts" who have delved into transportation at the taxpayers' expense can be cleared of suspicion of harboring enthusiasms other than that for the common weal.

●

MORE WORK PER CAR: The work that the railroads are getting today out of a limited quantity of freight cars is something to marvel at—as W. D. Beck of the Car Service Division made clear to the car department officers at their Chicago meeting this week. The bad order ratio (4.8 per cent) is the lowest in history and each car is giving three-fifths more service than in 1918. This remarkable record is attributed by Mr. Beck, not only to the alertness of railroad organizations, but especially to the magnificent co-operation of the Shippers Advisory Boards, with their "vigilance committees"; and to the fact that government agencies are loading cars heavily and releasing them promptly.

TRUCKS ON THE G. M. & O.: The G. M. & O. is a thoroughgoing believer in co-ordinating rail and highway service, as an article herein, descriptive of its operations, reveals. The system is almost entirely paralleled, now, with truck routes; and complete paralleling is the goal. While truck operations are handicapped in some instances as to interstate operations, by I. C. C. restrictions on the kind of traffic which can be taken—the highway vehicles are used as far as these limitations allow to give a combined rail-plus-truck service which neither agency, acting independently, could match. The arrangement gives the shipping community a superior service, and has brought to the company a large volume of business which, otherwise, it would not be enjoying.

●

REASONS FOR PAY RISE: The alleged "increased productivity" of railroad employees and insistence that railroad wages are lower than those paid for comparable work in other industry are the principal arguments advanced thus far by the non-operating unions before the "emergency board" to justify their claims for more money. The chief reason cited for granting paid vacations is that other industries (some of which are making a lot more money than they ever did before) are granting this concession to the help. The report on the opening sessions of the hearings, published herein, reveals that, possibly, a lot more railroads are involved in this case than thought they were.

●

HOT BOXES AN INDICATOR: Twenty years ago, hot boxes on freight cars were 5 times as frequent as they are today and engine failures were 7 times as frequent. Attention was drawn to this fact by V. R. Hawthorne in his address to the joint meeting of mechanical officers this week in Chicago, reported herein. Mr. Hawthorne cited this accomplishment as a quantitative measure of the effectiveness of collaboration of railway officers, in groups such as that which he was addressing, in finding answers to their common problems; and in making the accomplishments of each the property of all. Continued unspectacular research, both by railroads and manufacturers, was also credited for the unrelenting progress being made in mechanical department performance.

●

200 ARMY MIKADOS?: Of major interest in the equipment market activities revealed in the news pages herein is an unconfirmed report that the War Department is inquiring for some 200 Mikado type locomotives, to be given an A-1-A priority rating. The effect of such an order, preferred above the locomotives which the railroads have ordered and which they will need to handle next year's prospective traffic, is bound to cause concern; especially since equipment deliveries are dangerously behind schedule already. We will leave it to others to speculate why the War Department is in such a hurry to get so many locomotives of a type which does not appear especially suited for service on the North American continent.

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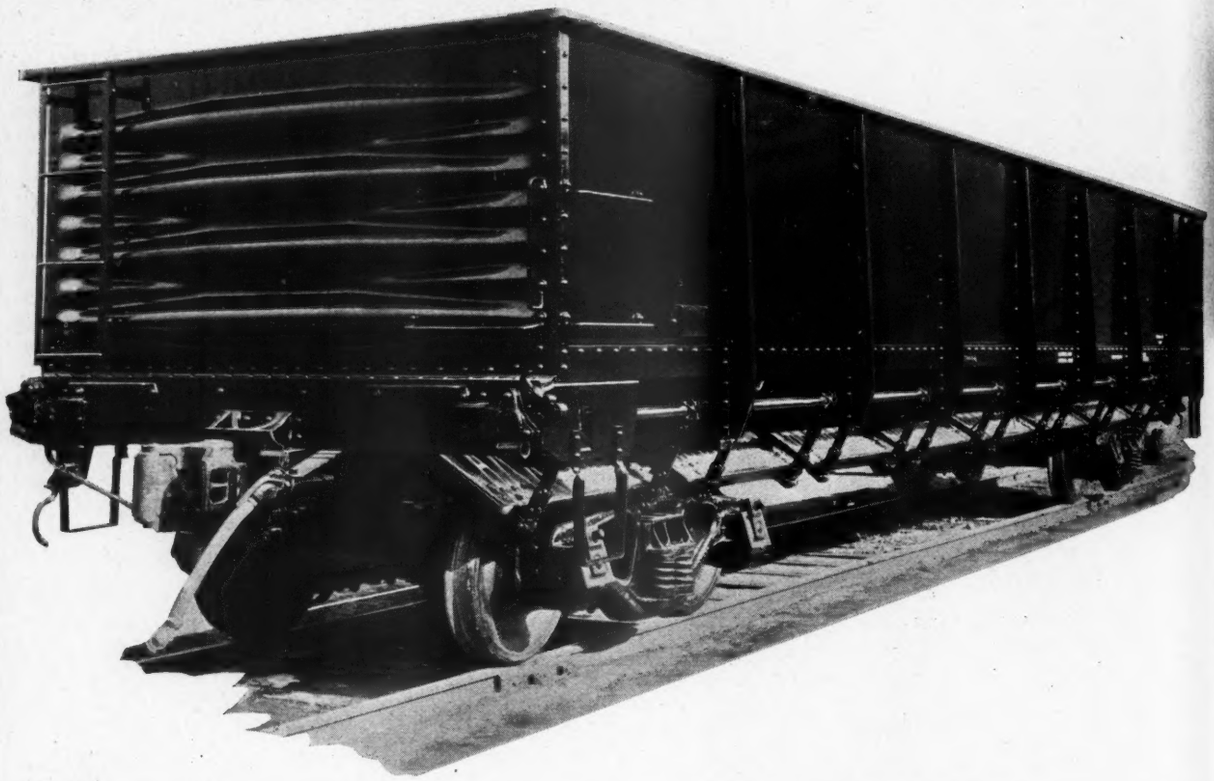

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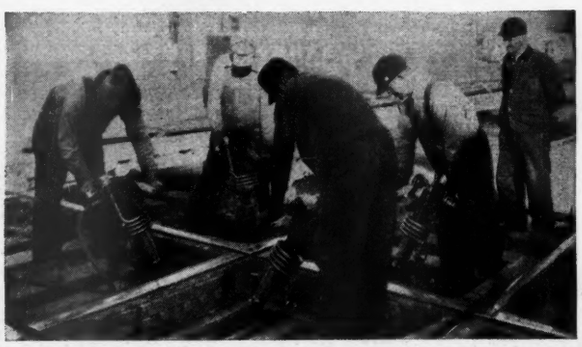

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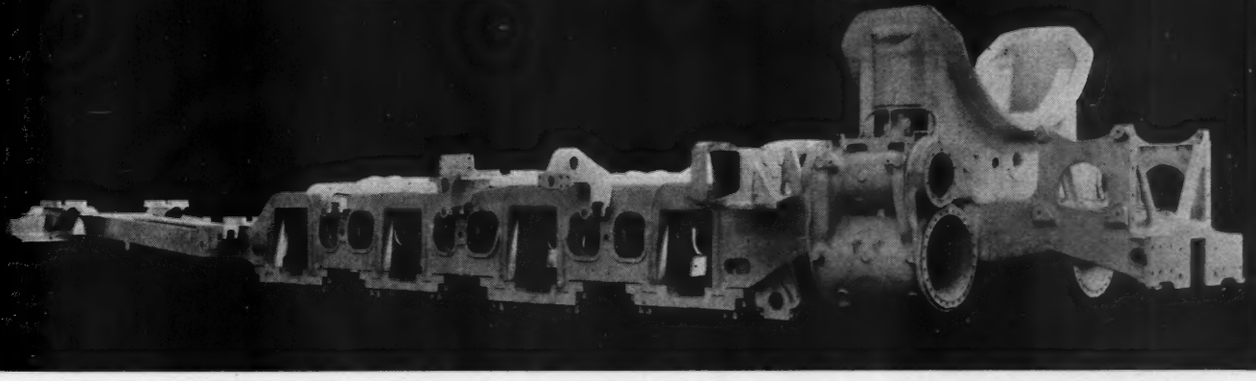

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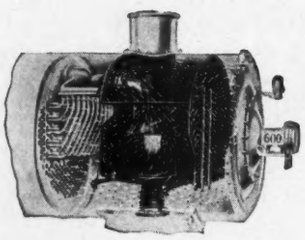

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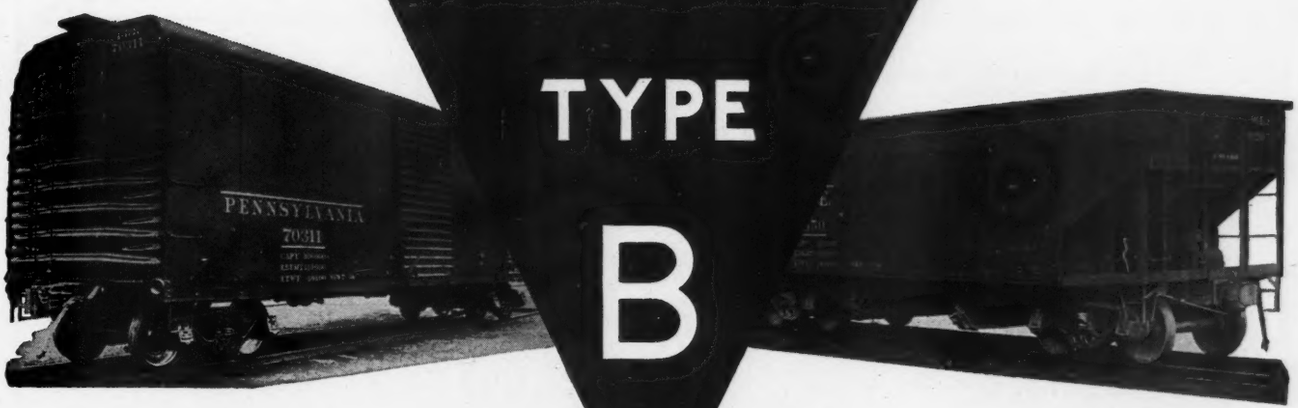

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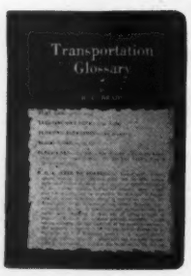

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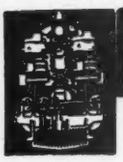

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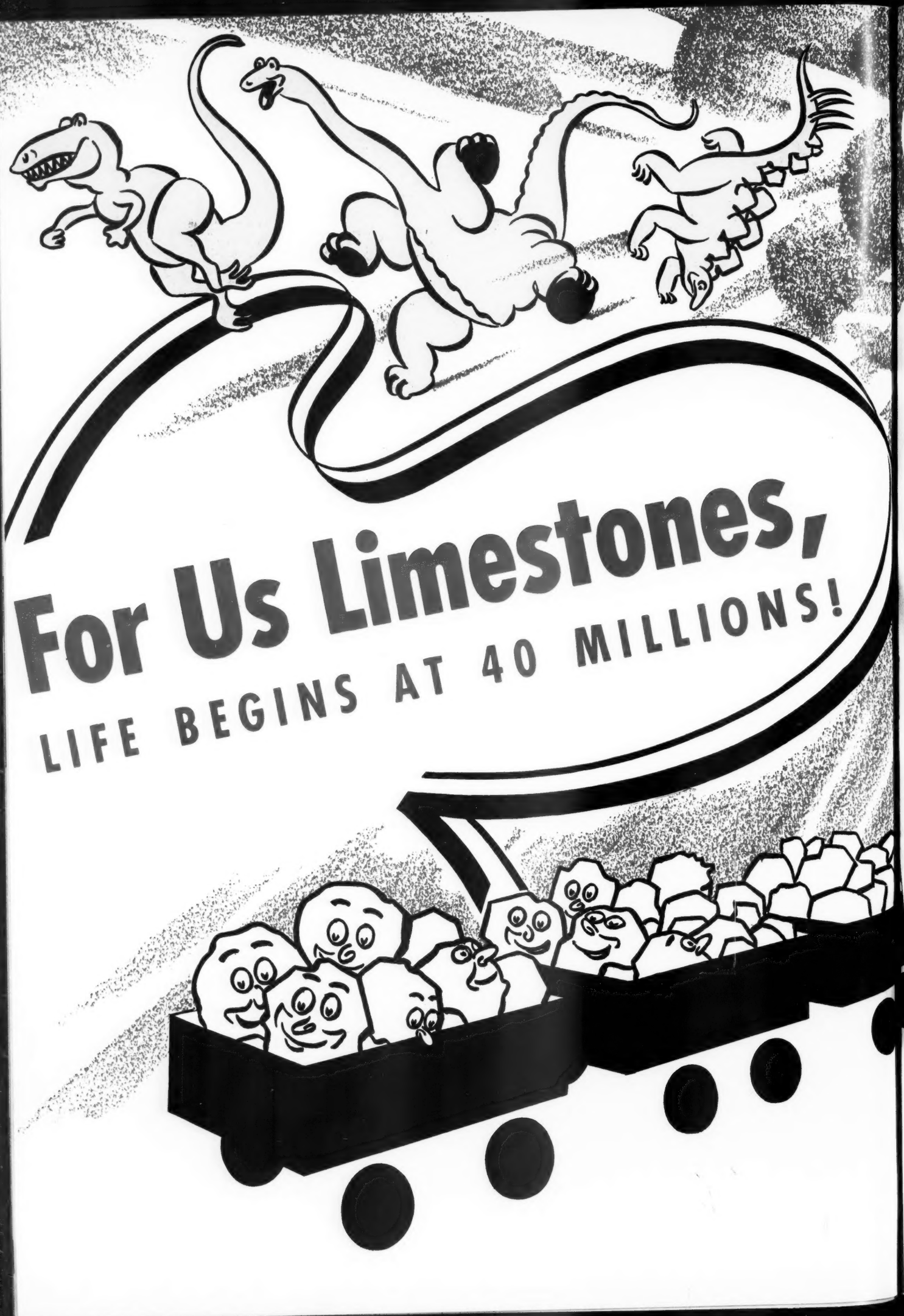
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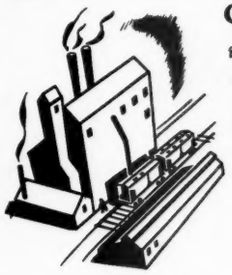
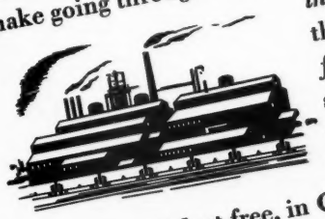
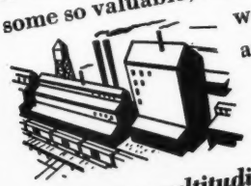
BANG!

BANG! went the Big Blast, and it blew us Limestones from the Mesozoic Age of Reptiles right into a flock of 1941 A.C.F. *quarry cars!* The next thing some of us knew, we were going through the crushers and the fiery furnaces, and pouring out as cement into a string of A.C.F. designed and built *covered hopper cars.* A few days after that, we were poured into the forms up at the big dam—and our particular travels seem over now for a long time to come.

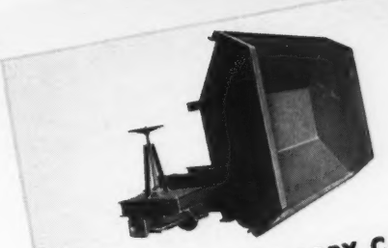


AFTER the Big Blast the rest of us Limestones headed off in many different directions. In A.C.F. *hopper cars,* some of us were off for the steel mills and the A.C.F. *charging box cars.* There we saw the steel we helped to make going through the mill in A.C.F. *ingot mould cars,* and leaving the mill in A.C.F. *gondola* and *flat cars.* Others of us Limestones found ourselves converted into lime; and travelling without a sack to our name, yet bone-dry and dust-free, in A.C.F. *covered hopper cars.* Some of us stopped at the glass plants. The rest of us went to dozens of other industries. Our finished products took the road again—a lot in A.C.F. *box cars;* but some so valuable, and so greatly needed, that they were rushed out in A.C.F. *express cars* and A.C.F. *mail cars.*





★ *To the multitudinous activities of national defense, as well as to the swift, efficient, and profitable conduct of civil affairs, the railroads of this country make an invaluable contribution. Today, perhaps more than ever before in our long career as a supplier of railroad rolling stock, are we cognizant of our deep responsibility to make all needed cars available at the earliest possible moment.*

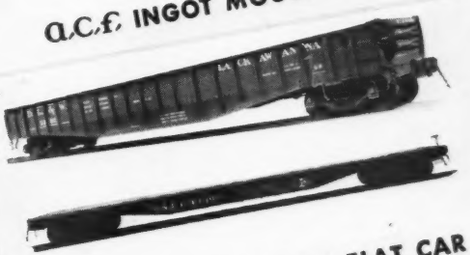


A.C.F. QUARRY CAR

A.C.F. COVERED HOPPER CAR

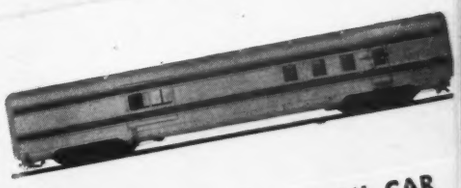
A.C.F. CHARGING CAR

A.C.F. INGOT MOULD CAR



A.C.F. GONDOLA AND FLAT CAR

A.C.F. BOX CAR



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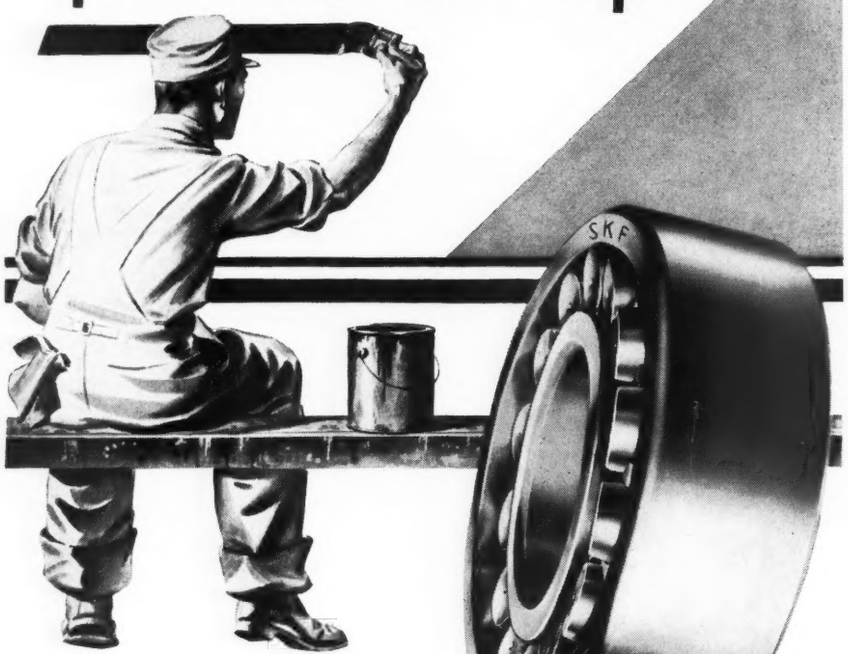
AMERICAN CAR AND FOUNDRY COMPANY

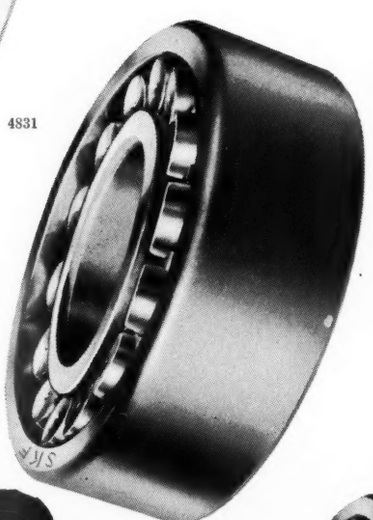
NEW YORK · CHICAGO · ST. LOUIS · CLEVELAND · PHILADELPHIA
PITTSBURGH · ST. PAUL · SAN FRANCISCO

A.C.F.

★ ★ ★ ★ ★ ★ ★ ★

Take care of the bearings that speed the machines that keep production up!





Patriotism demands that all bearings . . . and the machines they protect from wear . . . be given proper care. SKF Bearings, correctly installed and lubricated, will outlast the present crisis . . . however long it lasts.

SKF INDUSTRIES, INC., PHILADELPHIA, PA.

SKF

BALL AND ROLLER BEARINGS

STABILIZE FOR *Economy*

. . . and You Can Speed-Up Freight Operations with GREATER SAFETY

OVER 52,000
BARBER-STABILIZED CAR SETS

Now Giving Satisfactory Service On Forty-Three Roads and Private Car Lines

BARBER-STABILIZED Trucks Are Designed With or Without Spring Planks and With or Without Lateral Motion

The great demand, today, for *more speed* in freight transportation has been still further emphasized by the needs of National Defense.

But Haste, sometimes, makes a good deal of Waste . . . and benefits from increased speeds and loads are often considerably offset by the higher maintenance costs, shortened car life and lading damage that result.

You can speed-up your freight operations with REAL ECONOMY and INCREASED SAFETY by BARBER - STABILIZING your trucks.

BARBER - STABILIZED Trucks assure smoother, easier riding to heavily loaded cars at all speeds by minimizing and controlling the destructive bouncing action of the spring nest. Millions of damaging shocks to cars and lading are thus more effectively cushioned.

These advantages of Barber Trucks are *permanent* — endure as long as the truck itself — because BARBER - STABILIZED Trucks are *initially tight* and *stay tight*, wear from friction being automatically taken up. Increased speeds are thus made safer.

It will pay you in ECONOMY and SAFETY to BARBER-STABILIZE NOW!

STANDARD CAR TRUCK COMPANY
332 SOUTH MICHIGAN AVENUE CHICAGO, ILLINOIS

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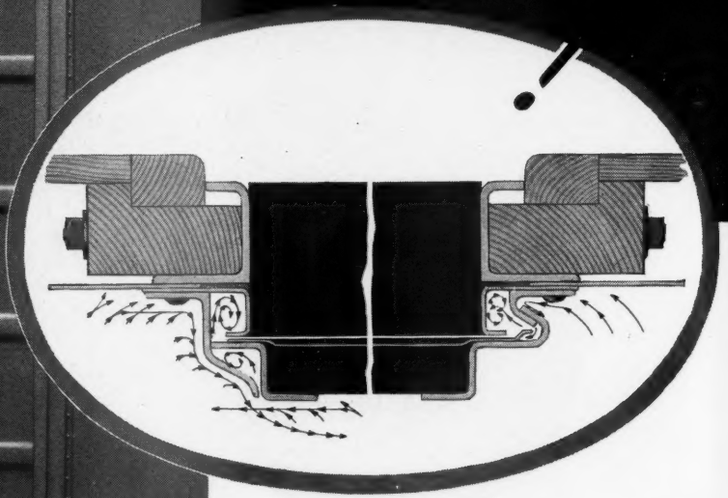

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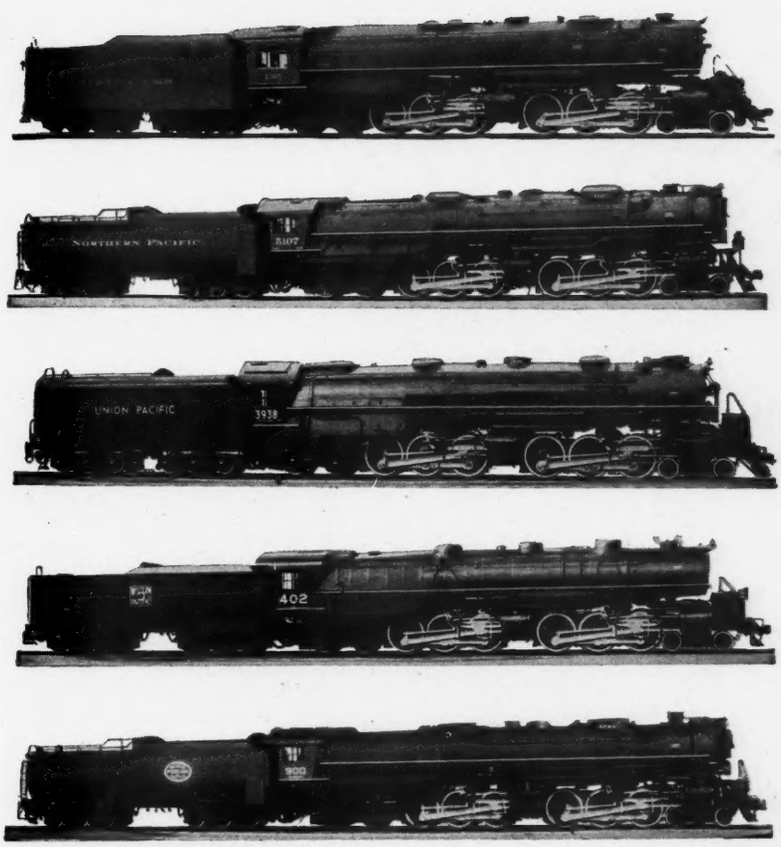
Lading protected against cinders —rain—snow—dust . . means diminished claims and satisfied shippers.

SUPERIOR CAR DOOR CO.

McCORMICK BUILDING, CHICAGO

"Railway" Springs



For the BIG FELLOWS

MODERN high-powered locomotives hauling heavy freights at high speeds require regular "he-man" springs to cushion the stresses between locomotive and track. Smooth easy riding is possible only when high quality springs of correct design and resiliency are used all around — on drivers, engine trucks, trailer trucks and tender trucks, "Railway" Springs answer every service requirement. They are manufactured from the finest steels in the most modern plants with all the benefits of long experience, progressive research, testing and engineering facilities.

AMERICAN LOCOMOTIVE COMPANY
Railway Steel Spring Division
30 CHURCH STREET, NEW YORK. N. Y.

3-Way Saving with "Coil-Elliptic"

1 "Coil-Elliptic" controlled spring action *reduces lading damage claims* by eliminating destructive car bounce.

2 "Coil-Elliptics" provide smooth, easy riding — *protecting cars from "bounce-damage"*—cuts down costly maintenance.

3 "Coil-Elliptics" help *prevent damage to track*—a further saving of material, time and labor in costly road upkeep.

Protect Your Lading and Equipment with Symington Devices

THE SYMINGTON-GOULD CORPORATION

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Any way you want to look at it...

- **FIREBARS PROMOTE HIGHER COMBUSTION EFFICIENCY:**
  Uniform air distribution—thin, hot fires—higher firebox temperatures—save coal.
- **REDUCE GRATE MAINTENANCE:**
  Units cannot crack, break, plug up or warp—outlast table grates many times.
- **STANDARD FIREBAR UNIT INTERCHANGEABLE ON ALL LOCOMOTIVES:**
  Reduce grate inventory—eliminate costly patterns.
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  Thin fires require less frequent cleaning—can be conditioned at the pits in a few minutes.
- **SIMPLIFY REPAIRS IN THE FIREBOX:**
  Easy to handle FIREBAR units can be slipped off carrier bar to gain access to mudring and grate area without disturbing shaker connections.
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  Live coals cannot drop through to ash pan.
- **FIREBARS** have replaced table grates on over 6,000 locomotives, representing the finest, most modern power on 72 railroads. Specify FIREBARS, the modern grate.

WAUGH EQUIPMENT COMPANY

NEW YORK CHICAGO ST. LOUIS

CANADIAN WAUGH EQUIPMENT CO. LTD., MONTREAL

FIREBARS

save their way

HYATT ROLLER BEARING JOURNAL BOXES
Details of Hyatt Roller Bearing application and special features of Type J Journal Box design are shown in cut-away view.
HYATT
High Capacity—High Mileage Bearing
One Piece Bronze Cages Centering on Inner Race
Separate Thrust Provision Permitting Free-Lateral Axle Movement
Effective Oil Retention and Circulation
Positive Water and Dirt Exclusion
Easy Removable Journal Box Simplifies Wheel Work
Component Parts of Bearing Completely Separable
Box and Bearing Designed for Easy Inspection and Maintenance
DEPENDABLE — ECONOMICAL — ACCESSIBLE
Component Parts of the Hyatt Roller Bearing for Railroad Journal Boxes
BRONZE CAGES
CENTER RING
INNER RACE
ROLLER ASSEMBLIES
OUTER RACE
HYATT BEARINGS DIVISION — GENERAL MOTORS SALES CORPORATION

In this attractively colored 27 x 42 inch wall hanger the cut-away Hyatt journal box application and the wheel are illustrated nearly full size to show details of design. Recently it was mailed to railroad folks all over the country. If you did not get a copy, or wish another, write for it. No charge or obligation.

• Note simplicity of design and sturdy construction of radial bearing application as shown in the above reproduction of Hyatt wall hanger chart.

HYATT BEARINGS DIVISION, GENERAL MOTORS SALES CORPORATION, HARRISON, N. J.

RECONDITIONED FREIGHT CAR PARTS
30 – 40 – 50 TON CAPACITIES
MOUNTED AND LOOSE WHEELS
AXLES
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BRAKE BEAMS – LEVERS – BOTTOM RODS
DRAFT GEARS – ALL TYPES
COUPLERS – TYPE "D" "E" MCB
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Complete Stock - Write Us Your Needs
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WITH
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ENGINEERED PRODUCTS
BE SURE IT'S GENUINE VAPOR ENGINEERED
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GUARANTEED EFFICIENCY
VAPOR CAR HEATING CO., INC.
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RAILROAD FLAT CARS - REBUILT
Fish Belly Underframes – Steel Side Frames
40-TON CAPACITY – COMPLETELY OVERHAULED
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CAR HEATING
SPECIALTIES
GOLD CAR HEATING & LIGHTING CO.
NEW YORK

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in three-quarters of a century of continuous production, has established a record of performance that is unequalled in the history of insulated wires and cables.
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432 pages, 140 line sketches, 140 photographs, 17 color plates, 2 maps in color, 6 x 9, cloth, $1.50.

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By Edward Hungerford

The biography of the dean of American railroad officers and Chairman of the Board of the Baltimore and Ohio. The story begins with boyhood days on a Vermont farm 70 years ago. It traces his rise from menial tasks to locomotive engineer on the "Soo Line," and then more responsible work on the Baltimore and Ohio, the Erie, the Burlington and back to the B. & O. as president.

352 pages, illustrated, 6 x 9, cloth, $1.00

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30 Church Street New York, N.Y.

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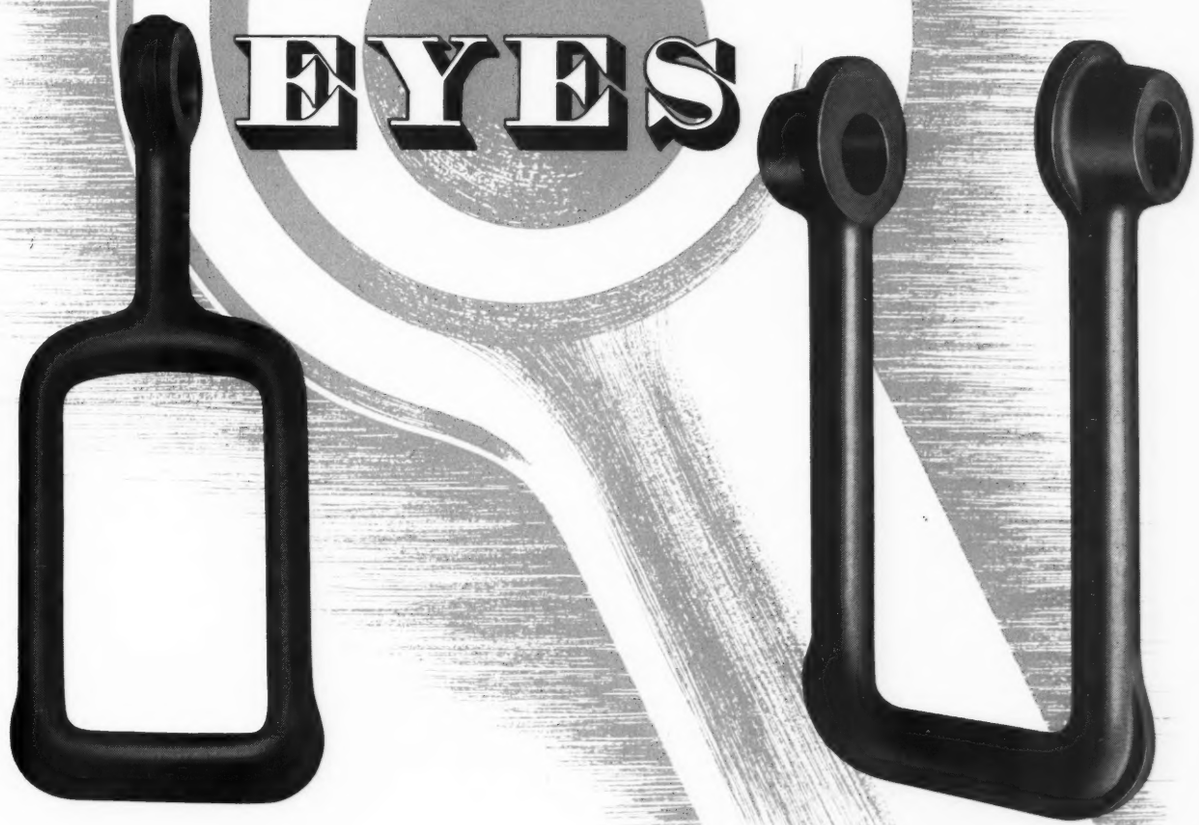

With a loaded car set out for a new brake beam hanger, it is important that hanger eyes be accurately formed to take the pin. Carelessly formed eyes mean a trip to the machine shop for reaming—extra cost and delay. The eyes in Schaefer forged steel Hangers are always accurate to size—they save you time and money. Schaefer Equipment Company, Koppers Building, Pittsburgh, Pa.

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Consult our nearest office or request Bulletin 171.

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A-1534